Oil, Paint and Drug Reporter

VOL. LIII. No. 26. NEW YORK, MONDAY, JUNE 27, 1898. FOR RATES SEE PAGE 5.

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NEW YORK, JUNE 27, 1898.

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PLAINTIFFS WIN A POINT IN THE N. W. D. A. SUITS..

In November last Justice Pryor of the Supreme Court granted the motion of defendant's counsel to strike out certain portions of the amended complaint in the case of the John D. Park & Sons Co. against the National Wholesale Druggists' Association and others. The portions stricken out comprised pretty much all of the allegations of the complaint, they having been characterized by defendant's counsel as irrelevant and redundant, which characterization was sustained by Justice Pryor. The amended complaint in the case was practically a comprehensive synopsis of the published proceedings of the N. W. D. A. and its Proprietary Committee, from the time the organization was formed down to the commencement of the suit. Much of the matter was obviously redundant, and the relevancy of a good deal of it was not apparent to a layman, but the general character of the complaint suggested an intention on the part of plaintiff's counsel to set up a mass of fact and inference that would lead defendants, in such admissions as they might make as to the facts, to also lend some coloring to the construction which plaintiffs had placed upon them. To whatever extent this strategic move was successful, it was an obvious help to plaintiff's case upon the trial. But the defendant's counsel did not, apparently, feel called upon to answer so voluminous a presentation of the case, hence the motion to strike out, which was granted by the Court upon the ground that the admission of much of the matter which was in the nature of evidence, must be prejudicial in the hearing of the case From this decision the plaintiffs appealed, and the opinion of the Appellate Court has just been handed down and is published in another column of this issue.

The questions involved in the original motion, as well as the appeal, are purely technical and have no bearing upon the merits of the case, and it is a notable illustration of the difference in the legal practice in the two States that no motion to strike out was made in the cases instituted at Philadelphia, in which the complaint was identical with that to which objection was made in the New York suits. On the contrary, out of 393 paragraphs, 179, consisting of documentary matter were admitted without qualification; 149 were qualified to the extent of denying the allegation that the efforts of the association and action of the manufacturers was a refusal to sell defendants, and affirming that these acts were merely an effort to secure a refusal to sell at a discount to which he was not entitled. The remaining 65 were denied practically without qualifications. As against this voluntary answer to the complaint, the Appellate Court, in modifying the order of Justice Pryor, only admits 172 paragraphs out of 399; and, while we have not before us the documents necessary to enable us to compare the portions admitted by this decision with those to which no exceptions were taken at Philadelphia, it would appear from the close correspondence of numbers that they are largely identical.

Be this as it may, the opinion seems, from the standpoint of equity as viewed by a layman, to be eminently fair, and for the most part, at any rate, not prejudicial to the case upon a final hearing. The court simply holds that in an equitable proceeding it is essential that the court should be placed in such full possession of facts as will enable it to determine the relief to which the aggrieved party is entitled and the measures necessary to afford that relief. The admission of facts or alleged facts in a complaint has no bearing upon the value of those facts in the ultimate hearing of the case. They may be controverted by evidence, or if sustained their legal effect may not bear out the interpretation put upon them by the complainant. For this reason, as we have already stated, the decision just handed down has no bearing upon the merits of the case or the questions of law or fact involved; it simply decides what, under the practice of this State, is admissible in the way of pleadings, and to that extent it is a point gained by the plaintiffs over the decision appealed from, although hey are still far short of what was contemplated by their amended complaint.

MEETING THE STAMP TAX PROBLEMS.

A majority of the drug jobbers of the country seem to have decided upon stamping the proprietary goods they have on hand as they are sold after July 1. The purpose of this action appears to be threefold. In the first place it is believed that there will be less confusion than in billing goods from a stock part of which consists of articles already stamped by the manufacturer and upon which the price may have been changed, while the remainder is unstamped, and therefore chargeable at the old list. Another moving cause is a desire to keep within the provisions of the law as interpreted by a few persons, who believe that the jobber is in some way responsible for the stamping of the stock which he holds on July 1. The third motive is the opportunity offered those jobbers who have stocked up heavily with unstamped goods, to make the difference between the cost of stamps and the advance in price which manufacturers will put into effect upon July 1.

In so far as the question of the liability of wholesalers is concerned, it is perfectly clear that the law does not intend, and cannot be construed to mean, that goods held by wholesale or retail dealers on July 1 shall be stamped except at the time of their sale at retail. This provision was inserted at the request of the trade, and for the avowed purpose of exempting them from the necessity of stamping stock in advance of its ultimate sale for consumption. One of the Collectors here has, we believe, given an opinion that the law does not mean what it distinctly and unqualifiedly says, but this view is at variance with that of that Commissioner who, in a letter quoted in our Washington correspondence to-day, replies to an inquiry upon this point by simply quoting the law, thus interpreting it literally. But, regardless of any liability in the matter, a large share of houses, as we have stated, prefer to affix stamps, or send the stamps duly cancelled with the invoice. The latter would be no compliance with the law, if it applied to goods sold by wholesalers, but it is an easy makeshift to save trouble for the billing clerk, and will probably be adopted in a large share of cases where goods are sent out in full dozens or gross lots or other original containers. Where there has been no advance in price by the manufacturer and he has not agreed to allow for stamps affixed by the retailer, there will probably be some kicking by the latter against any attempt that may be made by jobbers to saddle the cost of stamps upon him. It is true that he must ultimately bear it, but the law affords him an opportunity to defer the cost of the stamps he must affix until the sale is made, and this privilege he is likely to contend for. It is unfortunate that absolutely uniform action cannot be agreed upon by the jobbers throughout the country, as anything short of such agreement is pretty certain to result in irregularities in price, which the contract plan will be powerless to control.

The decisions thus far rendered by the department or the Commissioner upon the administration of the law, are given in our Washington letter, and show that everything possible is being done to permit of its being put into effect with the least possible friction. The difficulty of getting the stamps printed and distributed is fully appreciated, but nowhere do we see any statement as to what relief will be accorded the retailer who, on or after July 1, has a call for an article to which he is required to affix a stamp, but is unable to buy the stamp. There will be a good many such cases, and if discovered they may be summarily dealt with, though it is hardly supposable that absolute inability to comply with the law will not be accepted as a valid excuse for its violation in case the sale is made. So far as manufacturers are concerned, it is not likely that any excuse would be accepted, and there seems to be nothing to do, in the event of a shortage of stamps or stamped goods on or after Friday, but to defer deliveries. The delay promises to be annoying and costly, even though it may not be long continued. That "non-secret" preparations are subject to tax is made perfectly clear by the Commissioner, and although there is no decision as yet as to pharmaceutical products of a semi-proprietary character, it is probable that one will be obtained before the aw goes into effect.

LOW PRICES FOR MORPHINE.

The hope has been cherished in some quarters that when the price of morphine reached a certain figure, based on the price of opium that might be current at that time, it would be possible to import foreign morphine, in spite of the increase in the rate of duty from 50 cents per ounce to $1, which was intended to equalize the imposition of $1 per pound on opium. The statement has been made that at $2.25 per ounce as the strictly inside price for American in bulk, foreign can be imported and sold at a profit, all other conditions being equal. A reference to and an analysis of the prices now being quoted by the manufacturers shows conclusively that the present moment is not opportune for the importation of the foreign article. While $2.30 is the open quotation in bulk, the usual deductions for quantities will bring the price down to $2.15, or 10 cents per ounce below the limit at which importations could be made.

There are other conditions which do not appear in the open that would operate to prevent any importation of foreign salt, even if the net price on the domestic brands was $2.25. The fact is well known to the initiated that the present bulk price is now being shaded to as low as $1.90, and if present tactics continue to obtain in this industry there is no likelihood of the time ever coming when the foreign will obtain a foothold. It is true that conditions in this market for the past year or more have been unusually favorable to the American manufacturers, who knew that the duty of $1 per pound would be levied on opium long before the tariff bill became a law. They naturally took the precaution to lay in large quantities of the gum at low prices, and while they have followed their rule of making the price of the alkaloid and its salt conform to the current price of the gum, they have apparently had a wider proportionate margin to work upon than for a long time previously. With opium at $3.50 per pound for standard quality, the price of an ounce of morphine in the gum is estimated approximately at $1.75, which probably shows more than the average manufacturers' profit in the salt at $2.30 as listed, or at $2.15 net. But large quantities of the gum were purchased at $2.50@3, and it is safe to say that these lots have not all been converted into morphine, by reason of the fact that manufacturers always carry a stock of opium sufficient to last them several months, hence they are now working on plenty of "velvet," and it is safe to predict that no matter what the conditions might be they will not permit the foreign to gain any foothold here.

COLLECTORS OF CUSTOMS CAN ONLY STOP COUNTERFEIT PREPARATIONS.

The Treasury Department has taken important action, practically reversing its former decisions prohibiting importation of articles bearing genuine trademarks which are sought to be brought in by agents not authorized by the proprietors of the trademarks. The department has heretofore held in effect that the importation of genuine goods bearing registered trademarks, but which were brought in against the protest of the owners of the trademarks, constituted a violation of section 11 of the act of July 24, 1897, and for the purpose of prohibiting such importations, the trademarks thereon might properly be regarded as "copying or simulating" genuine trademarks. The latest decision of the department has been evolved upon the basis of two important opinions by the Solicitor of the Treasury, the first being given in reply to an inquiry as to whether entry could properly be refused to phenacetin if entered under the name "para-acet-phenetidine." The Solicitor holds that this is the chemical name of the article, and that it cannot be deemed a copy or simulation of its trade-marked name. For that reason the Treasury Department is not warranted in refusing entry to the article, the department not being interested in the further question of whether the importation involves an infringement of letters patent.

In the other case referred to the solicitor for an opinion, it was shown that the goods entered were undoubtedly genuine, and bore the foreign labels and trademarks of the manufacturer, although purchased abroad and being imported in contravention of the rights of the American licensees. Upon this the opinion of the solicitor was in accord with that given in the preceding case, and the Collector of Customs at the port of entry is deemed to be the person authorized to decide whether the labels counterfeit or simulate those of a domestic product. Under this opinion the department decides that goods bearing genuine trademarks cannot be excluded under the provisions of section 11 of the present law. It will be seen that this decision of the department is sweeping, and takes in all classes of goods the trademarks on which may be registered in the United States. The department is satisfied after full investigation that it cannot undertake to protect manufacturers against the competition of their own goods in the hands of other parties, and this ruling might find application to domestic goods which had been exported and bought for reimportation into the United States. Its most important application, however, is to the extended list of imported chemicals, which are sold here at prices very much above their foreign value, by reason of their being patented in this country, while their manufacture and sale abroad are unrestricted. Where such goods are manufactured, even on a small scale,

in this country, they possibly are entitled to the protection afforded by section 11, although this, as we stated when the order of March 1898, was issued, was to our minds a questionable application of the law. But it is now clearly established that a patentee cannot be protected under this law against his own goods under his own trademark, or against a like product of some other maker, when imported under its chemical name. His protection, therefore, remains primarily in the enforcement of the patent law against legitimate importations, although he will still have the assistance of the customs authorities in his efforts to prevent and punish smuggling. Doubtless the greater part of the competition from infringing goods of this class comes from smuggled merchandise, and the extent of the traffic is admitted to seriously menace the value of the patents on all of the preparations which sell at any material advance over the foreign price.

THE PERFECTED BANKRUPTCY BILL.

The commercial public is given encouragement to expect the passage of the bankruptcy law during the present session of Congress, the Conference Committee having concluded its labors, having perfected a bill which the members believe will prove acceptable to all interests affected and which fully protects the interests of both the creditor and debtor. It is stated that there was but one dissenting member and his objection was to certain provisions only. The scheme of providing a uniform bankruptcy law having progressed so far gives hope that it may pass both Houses of Congress without delay when once it is brought up, which Senator Hoar has promised to do as soon as the Hawaiian annexation proposition is disposed of. It is feared, however, that important matters relating to the prosecution of the war may again cause a postponement of the consideration of this measure, though our lawmakers should bear in mind that while the welfare of the commercial interests of the country is at all times vitally important, as affecting the welfare of the Government, it is, at the present time, when the Government's requirements make an extraordinary drain upon the people, secondary to no measure requiring legislative enactment. As the subject of tariff legislation has been prominently before Congress for several years, and the present bill is the result of mature deliberations in both Houses and in committees, it should pass promptly, without protracted discussion.

The bill, as perfected by the Conference Committee, is a compromise measure and is believed to embody the best features of the bills passed by the two Houses. The original Senate bill, proposed by Senator Nelson, has been discarded and a number of changes of considerable importance have been made in the House bill, but that has been made the basis of the new bill. The first section, devoted specifically to definitions, contains a new paragraph defining insolvency as follows: "A person shall be deemed insolvent within the provisions of this Act whenever the aggregate of his property, exclusive of any property which he may have conveyed, transferred, concealed, or removed, or permitted to be concealed or removed, with intent to defraud, hinder or delay his creditors, shall not at a fair valuation be sufficient in amount to pay his debts." The administrative features of the House bill, those relating to practice and procedure, were adopted almost bodily. In three material matters there has been a radical change from the House bill. The latter contained nine different classes of grounds upon which a man could be thrown into bankruptcy. The conferees reduced the number to five. These are: Transfer of property to defraud creditors; transfer of property to preferred creditors; naming preferred creditors through legal proceeding; when a man has made a general assignment to his creditors, and where a man admits in writing that he is insolvent, and is willing to be put in bankruptcy. The bill declares a man not insolvent so long as his property, at a fair valuation, and exclusive of what he has transferred to creditors, is equal to its debts. The House bill named four different offenses for which a bankrupt could be imprisoned. The new bill reduces the number to two. They are: Where he conceals property from the trustee to whom he has assigned, and for perjury in the bankruptcy proceedings. The House bill contained nine grounds for denying the discharge of a man from limitations under bankruptcy proceedings. The new bill provides but three, namely, where the bankrupt kept fraudulent books, and where he kept no books at all, for the purpose of perpetrating a fraud. A provision has also been added to the bill providing that a bond should be given where it was proposed to interfere with a man's property. The closing section of the act provides that the act shall go into full force and effect upon its passage, but that no petition for voluntary bankruptcy shall be filed within one month of the passage of the act and no petition for involuntary bankruptcy shall be filed within four months.

TRADE ITEMS.

[*For other Trade Items see contents on page 21.*]

The Centaur Co. has obtained judgment for $175 against Max Zaget.

The Sterling White Lead Co. has secured judgment for $323 against Hugh Nesbitt.

A company to operate a cottonseed oil mill is being organized at Brookhaven, Miss.

Judgment for $1,159 has been entered against Frank Seaman in favor of F. O. Boyd et al.

Judgment for $133 has been recorded against Godwin A. Distler in favor of Eimer & Amend.

The National Lead Company has secured an atachment against J. Harper Bonnell Co. for $483.

Mr. John Watson Cox, of the Antikamnia Co., sailed on the Germanic on Wednesday for a brief European trip.

The Cleveland Pharmacal and Manufacturing Company, of Cleveland, has increased its capital stock from $15,000 to $30,000.

The Ordnance Department solicits bids to supply paints, oils, etc., for the arsenal at Watertown, Mass. Bids will be opened July 25.

The Queen Anne Soap Company works at Detroit, Mich., recently destroyed by fire, are to be rebuilt on a much larger scale.

The N. Y. Plate Glass Insurance Company has caused judgment to be entered against Joseph B. Friedlander on a bill of costs of $166.

Mr. Wm. E. McCaw, president of the McCaw Manufacturing Co. of Macon, Ga., manufacturers of cottonseed products, was on 'Change on Tuesday last.

The Curol Chemical Company, of New York City, has been incorporated. Capital, $100,000. Directors: Wellen Smith, George W. Clayton and Samuel H. Britton.

Mr. A. P. Sauer, manager of the Southern Cotton Oil Mill at Houston, Tex., stopped in the city on Thursday last, on his way to the mountains for the summer.

The Ramage-Rogers Chemical Co. of Cleveland has been incorporated, with $20,000 capital, by O. S. Ramage, W. S. Rogers, Wm. B. Bolton, Wm. R. Edwards and H. A. Domer.

Mr. E. H. Burr of Lazell, Dalley & Co., has so far recovered from his recent illness as to be able to attend to business again, although he is not feeling quite his old self as yet.

Mr. George H. Williams, president of the Williams & Flash Co., cotton oil merchants, was on 'Change on Monday, after an outing of ten days passed in the wilds of New Jersey.

The Spanish steamship Panama, which was captured by the lighthouse tender Mangrove while bound for Havana on April 25, was sold at auction at Pier 20, East River, last week, and was purchased by the firm of Macy & Durham for the Government for $41,000. The purchase was regarded as a remarkable bargain, as insurance men had estimated the value of the Panama at $100,000.

Mr. A. G. Wackenreuter, who is connected with the Chicago office of A. Klipstein & Co., is in town, and will remain for several days.

The Dr. Nelson Company, of Catskill, N. Y., has been incorporated to manufacture medicinal and toilet preparations. Capital, $2,500. Directors: Fannie C. Mott, G. F. Mott, George C. Mott, P. E. Dayton and F. C. Magie.

Mr. J. Seaver Page may be less energetically devoted to the paint trade than he used to be, but he is none the less interested in hunting and fishing when an opportunity offers, and is now in the Adirondacks upon one of his periodical trips.

Under the name of borsyl a German firm have introduced into commerce a new dusting powder. Its analysis, however, discloses the fact that it is merely a mixture of well-known substances—chiefly boric acid, borates of the alkalies and cetyl alcohol.

A Jacksonville paper reports on the sponge finding: "The sponge catch off Anclote during the past trips aggregated a value of $40,000, of which about $30,000 was purchased by local buyers here (Anclote), the remaining $10,000 going to the Key West market."

The managers of the Produce Exchange have decided that the main trading room of the Exchange shall be closed between June 27 and July 1 at 3.30 p. m.; between July 1 and Sept. 1 at 3 o'clock, and between Sept. 1 and Sept. 15 at 3.30 p. m., and after that at 4 p. m., as at present.

The annual meeting of the stockholders of the Easley (S. C.) Oil Mill Co. was held recently. Under the management of B. C. Johnson the mill has been prosperous the past season, and a dividend of 25 per cent. declared. W. C. Smith was re-elected president and B. C. Johnson superintendent.

When completed the Heller & Merz Company will have very commodious and convenient offices at its Maiden lane store in this city. The second floor will be occupied by the counting room and private offices, the remainder of the building being used for storage, shipping and laboratory uses.

Mr. William McDaniel, Jr., who for over twenty years has represented Keasbey & Mattison in Philadelphia, Baltimore and Washington, died on the 19th. His late employers announce his death in terms which express their high esteem of him while living, and their loyal respect for his memory.

Mr. M. Frank of Atlanta, Ga., formerly with the American Cotton Oil Co., was in the city during the week calling on his many friends in the oil trade. While not having fully recovered his eyesight, it is, however, very much improved, and he hopes within a few months to be himself again.

The Dillon (S. C.) Cotton Seed Oil Mill Co. have commenced the work of refitting their plant. The wood ginnery is being torn down and a new fireproof building 22 by 75 feet dimensions will be erected. New machinery, consisting of four eighty-saw gins, with the necessary presses and conveyors, will be placed.

The Belgian Government has offered a prize of 50,000 marks ($9,683) for the invention of a match paste containing no phosphorus. Citizens of any country may compete. The conditions require an absolutely perfect match paste, a product which would be worth far more to the inventor if he keeps his process secret.

An explosion of naphtha in the grease rendering factory of Benjamin H. Nichols at Woburn, Mass., last Wednesday morning, caused a fire which destroyed the factory, and five of the employees of the factory were badly burned, one perhaps fatally. The loss on the factory and other property is estimated at $10,000. There is no insurance.

The alkali, etc., works registered in England, Ireland and Wales number 1,058, according to the report by the Chief Inspector for the year 1897, the decrease since the previous report was published being 16—11 alkali works and 5 others. In Scotland there are 125 works registered, bringing the total number of registered works to 1,183.

Elemi resin, which is very largely used in the manufacture of high-class varnishes, appears to contain the following well defined compounds: Amyrin $C_{26}H_{40}$, elemic acid $C_{35}H_{56}O_4$, an amorphous resin $C_{10}H_{18}O$, bryoidin $C_{10}H_{22}O_3$. Authorities differ greatly on the analytical contents of this resin, and a complete examination is much neded.

Among the changes made by the Mississippi Cotton Oil Company of Jackson, Miss., in the management of their mills for the coming season, are Mr. J. W. McRaven, who has been cashier of the Jackson mill for a number of years, and who goes to the Natchez mill, he being succeeded at Jackson by Mr. P. Sharkey, son of the Hon. Clay Sharkey.

The certificate of incorporation of the George B. Wray Drug Company, of Yonkers, N. Y., has been filed. The corporation is formed for the purpose of manufacturing and dealing in all kinds of drugs and chemicals. The capital stock is $100,000, and the duration of the company is fifty years. The directors are George B. Wray, Harrie D. Shipman and Rose M. Combs.

Four buildings used for the storage of raw tallow, and forming the larger part of the soap factory of Colgate & Co., at Grand and Hudson streets, Jersey City, were destroyed by fire last night. More than a dozen iron tanks filled with tallow were also destroyed. The fire started near a chimney on the roof of the three-story building 50 Grand street. The loss to buildings and stock is estimated at $40,000.

The Red River Oil Co. met recently at Alexandria, La., and elected the following directors, viz.: B. M. Bryan, M. C. Mosely, E. V. Weems, G. W. Bolton, S. S. Bryan, W. B. Turner and W. C. Scott. The new directors met and elected the following officers, viz.: B. M. Bryan, president; W. C. Scott, vice-president; S. S. Bryan, secretary; W. B. Turner, treasurer. A dividend of 10 per cent. was declared.

Judge Puterbaugh last week dismissed for want of equity the suit of George F. Harding of Chicago against the American Glucose Company and the Glucose Trust to set aside the sale of the former company, in which Mr. Harding was a stockholder. The case was at once appealed to the Supreme Court. President Matthiesen of the Glucose Trust was the only witness examined and every question was objected to by his attorney.

Mr. F. W. Brode of Memphis has concluded his little visit to this section of the country, and returned home on the 18th via steamer to Savannah. He was accompanied by his daughter, who had been at school here during the winter. Mr. Brode made a hurried visit to Boston while he was up this way, but happened to be there on "Bunker Hill Day" and found the streets running knee-deep with patriotism and no business in sight.

Samuel S. Marples, one of the most prominent members of the Produce Exchange, with which he had been connected since 1865, died at his home, No. 9 Second Place, Brooklyn, yesterday morning after an illness of a year. His sickness was due to chronic weakness of the heart. Mr. Marples was an Englishman, and was born in Liverpool in 1835. Since 1863 he had lived in Brooklyn, but had never taken out naturalization papers. He leaves a widow, four daughters and two sons.

The production of sulphate of ammonia in Great Britain in 1897 was as follows: Gas works, 132,724 long tons; iron works, 17,779; shale-oil works, 37,153; coke ovens and producers, 10,624; total, 198,280 long tons, an increase of 7,371 tons over 1896. In spite of the increase in production the price has risen. The increased consumption of sulphate of ammonia in making fertilizers has, however, interfered with the imports of nitrate of soda. The production of sulphate of ammonia in the United States in 1897 amounted to 3,111 tons, chiefly from coke-oven gases.

Einhorn & Baumeister have prepared a new series of derivatives of caffeine. By treating chloro-caffeine with potassium cyanide and acting upon the product with alkali, a caffeine-dicarboxylate of sodium is obtained. From this the corresponding free acid was prepared by the addition of concentrated hydrochloric acid. It forms a fine microcrystalline powder, melting with decomposition at 141°. A number of other derivatives of the base are also described; piperidyl-caffeine crystallizes from alcohol in colorless needles, melting at 142°. Diethylamido-caffeine forms small prisms, melting at 109°. Dipropylamido-caffeine forms prisms of melting point 95°. The corresponding amyl and benzyl compounds melt at 99° and 162° respectively. Apart from the value of these results from a purely chemical point of view, it is interesting to know that all the series of new derivatives are being subjected to a careful series of therapeutic experiments, the results of which will be published later.—**Berichte.**

Messrs. Stewart Bros. & Spencer of London announce that Mr. Percy Malcolm Stewart, son of Mr. Halley Stewart, and who has been connected with the firm for a number of years, was admitted to a partnership on June 1.

Cottonseed oil mills who need a superior quality of press cloth, should communicate with Messrs. F. W. Brode & Co., of Memphis, Tenn., who are the agents for the J. T. Perkins Co.

On the 7th inst. at Winnington Old Hall, Norwich, in commemoration of the twenty-fifth anniversary of the establishment of Messrs. Brunner, Mond & Co., the directors gave a complimentary banquet to Sir John Brunner, M. P., and Dr. Ludwig Mond. Nearly all the directors and staff were present, and the function was brilliant. Mr. John Crosfield presided. Mr. Ernest Solvay, founder of the renowned chemical process, journeyed from Brussels to attend, and proposed success to the firm. Sir John Brunner and Dr. Mond gave an interesting retrospect.

The notice which appeared in these items in our issue of the 6th inst. seems to have been erroneous in conveying the impression that the Forest City Linseed Oil Co. was a crusher of linseed. Correspondence elicited by that notice has led to inquiries on our part, which do not bear out such an impression, and lead us to believe that our correspondent who sent in the notice was not warranted in the interpretation which he gave to the claims made in an advertisement. We are also compelled to say that our inquiries do not enable us to make any authoritative statement as to the nature of the company's product.

By a unanimous vote the New Jersey Court of Errors and Appeals last week affirmed the decision given by Vice-Chancellor Reed a year ago in favor of the American Tobacco Company. The suit was brought by the Attorney-General on complaint of John R. Miller & Co. of Newark, and an attempt was made to have the charter of the tobacco company declared void on the ground that it was a monopoly. The chief grievance of Miller & Co., who represented the National Tobacco Company, an opposition cigarette manufacturer, was that the American Tobacco Company refused to sell goods to dealers who bought from its rivals.

Mr. Edward H. Raynolds of the F. W. Devoe & C. T. Raynolds Co. will be accorded the profound sympathy of the trade in the bereavement he has sustained by the death of his wife at San Francisco on the 18th inst. Mrs. Raynolds, who was a daughter of the late W. P. Fuller of San Francisco, had not been in good health for a long time, and was on a visit to her home in the hope of deriving some benefit from the milder air of that coast, when her condition became so serious that Mr. Raynolds was summoned by telegraph, and was fortunate enough to reach her bedside a few days before her death. Their family consists of two young boys.

Like the United States, Russia is slowly giving up British alkali, and makes her own by the Solvay process. Ljubimow & Solvay have three works, producing 4½ million poods (1 pood equals 36 pounds) of soda annually, including one million poods of caustic soda. The imports of soda fell from 2,011,000 poods in 1885 to 887,000 poods in 1894. There is a special reason for so rapid a diminution in the imports. The purification of one million poods of naphtha products used to require two million poods of caustic soda annually. For a long time the soda residue was worthless waste, until improved processes were devised, and a regeneration of the residue in reverberatory furnaces succeeded. Baku now requires 300,000 poods for naphtha purification, and half of this is recovered.

The Illinois Supreme Court has decided that public warehousemen cannot store their own grain or seed in their own elevators, issue warehouse receipts to themselves and thereby avoid the discharge of a public duty which the law has imposed upon them. This is the end of a fight that the Chicago Board of Trade has been making against elevator men for the past eight years. The decision of the Supreme Court affirms that of Judge Tuley in the lower courts; is a victory for the Chicago Board of Trade and a defeat for the elevator men, those named in the suit before the court being the Armour Elevator Co., Central Elevator Co., George A. Seaverns, Chicago Railway Terminal Elevator, Nebraska City Packing Co., Alex. C. Davis & Co., South Chicago Elevator Co., Charles Counselman and the Chicago Elevator Co.

PETROLEUM NOTES.

Grace & Murphy have drilled their No. 2 John Wolf through the sand, located on Plum Creek, and have a duster.

Lightning fired a 35,000-barrel oil tank owned by John Ellis & Co. at Warren, the tank and contents being totally destroyed.

At Bridgeville, Meldrin & Sons have drilled in their No. 1 on the Kramer lot and will have a producer good for fifty barrels a day.

In the Hendershot pool, near Murphytown, Wood county, the South Penn Oil Company has drilled in No. 2 J. D. Nowery and will have a 75-barrel producer.

On Campbells run, near the Marion and Wetzel county line the South Penn has drilled in its No. 2 on the Wilson Kinney farm. This well is good for 150 barrels a day.

On French Creek, Pleasants county, W. Va., Barnsdall & Co., after many delays, have drilled their wildcat on the John Gilmore farm, through the Big Injun, and have a duster.

Agents of an Eastern oil company are reported as leasing large tracts of land in the Osage reservation and Pawnee country and will put down prospect holes and develop the fields thoroughly.

The Limestone Oil Company's No. 2 on the J. J. Layfield farm on Elm run has been drilled through the sand and is dry. Major Hawkins met with the same kind of luck at his No. 8 on the McGregor estate.

Robert Roy, Sr., of Bradford, whose death occurred on the 16th inst. at Rochester, N. Y., from heart disease, was one of the pioneers of the oil business and was well known among the oil men throughout the various fields.

The Union Oil and Refining Company of Cheyenne, Wyo., has filed articles of incorporation with a capital stock of $4,500,000. The company is composed of Philadelphia investors, who will develop the oil field in the vicinity of Douglas.

Barnsdall & Marshall have completed their No. 1 on the D. Eddy farm in Grant district, and have a good salt sand producer. The South Penn Oil Company's No. 1 Andrew Hall, on the north fork of Hughes River, is producing 20 barrels a day from the salt sand.

The New Jersey Court of Errors and Appeals has sustained the Supreme Court in giving the right to the National Transit Company to lay oil pipes through the city of Elizabeth. The matter was vigorously fought in City Council, and the ordinance granting the permission was finally passed against a storm of protest from property owners. The pipes will be laid at once.

A year ago Elk Fork at this time was forging to the front and placed 75,000 to its credit in June, and three months later had increased its output to 267,000 barrels. From 37 producing wells in June the number had been swelled to 122 in September, the month of its highest production. From April to December inclusive the Elk Fork pool produced more than a million and a half barrels of oil.

The Circuit Court of Ohio has decided that where a lessee of oil lands agrees to complete four wells the second year, two of them the first six months, and two of them the last six months, the completion of four wells during the second year is such a substantial compliance with the provision of the lease as will defeat a forfeiture. Where such lessee stipulated that 22 acres shall be forfeited for each well not so completed, the stipulation is void for uncertainty.

The average production of the new wells in the Hendershot pool in Wood county is better than that of any other development in the lower southwest. In the past thirty days there have been ten wells completed in that district, with an average production of sixty-five barrels a day. The only duster credited to that development in the past month was drilled in last week, and is the property of the United States Oil Company & Greenlee. It is their No. 5 on the McPeak farm, near Murphytown, and the fact that it is located only 400 feet west of their No. 4, a good producer, makes it all the more a surprise. In point of activity this pool surpassed any part of the lower southwest. There are nineteen drilling wells and fourteen rigs up. In the south extension there are fourteen wells drilling and seven rigs up.

Richards & Co. have drilled their test on the J. Jones farm, on Nutters fork, through the Big Injun, and found that formation barren.

In the deep sand territory near Stringtown, Tyler county, the South Penn Oil Company has drilled in its No. 4 on the Samuel McMillan farm. The well produced sixty barrels the first twenty-four hours after it was drilled into the pay. The same company has drilled its No. 2 on the W. J. Price farm through the Gordon, and has a duster. The well is located in the Big Injun territory in Wetzel county, but proved a duster in the Big Injun, and was then drilled to the lower sand, with no better result.

The larger wells in the Whiskey Run pool are holding on with commendable tenacity. Late gauges were as follows: Williamson Nos. 3, 4 and 5, 120, 120 and 180 barrels, respectively; Bumgardner Nos. 2 and 3, 100 and 180 barrels, respectively; Abicht No. 2, 180 barrels; Mahaney No. 1, 150 barrels and Joseph Payne No. 1, 105 barrels. Total production of the eight wells, 1,135 barrels a day. These wells are located on a comparatively small area, which makes their staying qualities all the more remarkable.

United States Consul Taylor at Shanghai in a report on the trade of North China says: "We are struck by the astonishing progress made in the importation of kerosene oil, the total increase for all kinds amounting to over 32,000,000 gallons. American oil is finding vigorous rivals in Russian, and especially Sumatran oils. To go back three years for purposes of comparison: In 1894 the figures were: American, 51,670,853 gallons; Russian, 17,500,283 gallons; Sumatran, 534,280 gallons; while in 1897 they were, American, 48,212,505 gallons; Russian, 36,924,125 gallons, and Sumatran, 14,212,278 gallons."

The new wells in advance of the Elk Fork pool in Tyler county are coming in light producers or dusters. H. B. Peters & Co. have completed their No. 4 on the T. G. Hawkins farm, and have a 25-barrel producer. The location is 175 feet southwest of the Fisher Oil Company's No. 4 Isaac Hawkins. The same company's No. 5 on the same farm is good for 100 barrels a day, located 300 feet southeast of No. 3 M. A. Gorrell. The Sun Oil Company has completed its test well on the Chapman farm, located 2,000 feet southwest of J. K. Hill No. 11, and have a duster. The Henry Oil Company's No. 1 L. L. Gorrell has been completed and is good for 40 barrels a day. The location is 100 feet northeast of M. A. Gorrell No. 1.

MISCELLANEOUS.

Jobbing Druggists and the Stamp Tax.

There has been no attempt to secure uniform action by the New York jobbers in relation to unstamped goods held in stock on July 1. So far as we can learn, however, it is the present intention of all the local houses, with one exception, to stamp their stock as they send it out, and bill at the advanced price, or, where the price has not been advanced and stamps are not furnished by manufacturers, to make a direct charge for the stamps, although it is expected that the latter charge will be resisted by retailers in many cases. The Collector of Internal Revenue for the downtown district of this city has given as an opinion that wholesalers must stamp their stock, as it is sold, but this is not borne out by the letter of the Commissioner to a Cincinnati house, given in our Washington correspondence this week, in which he appears to interpret the law literally. The opinion of the collector does not appear to have influenced the action of houses here so much as the idea that it would avoid confusion in billing if their own stock were at once put on a uniform basis with goods coming from the hands of manufacturers.

The exception referred to above is Messrs. Lehn & Fink. Mr. Albert Plaut, the head of that firm, states that it will not stamp goods, but will bill all unstamped articles at the old price, and let the retailer stamp them at the time of sale as provided by law, and make any claims for stamps upon the manufacturers direct.

The following circular, issued by Mr. Frank A. Faxen, chairman of the Proprietary Goods Committee of the N. W. D. A., under date of June 20, states the action determined upon by jobbing druggists at the West and South with reference to the stamp tax:

After the Stamp Tax bill had been enacted into law, it became evident, owing to the difficulties which it involved, that it would be necessary to take prompt steps to secure, if possible, uniform action on the part of the jobbing drug trade of the United States. As the time was too short to arrange for a general meeting of the entire trade of the country, the chairman of this committee wired the presidents of the various local exchanges and associations in the Middle West and South, requesting them to appoint delegates to represent their respective organizations at a conference meeting to be held at the Southern Hotel, St. Louis, on Saturday, the 18th inst. Invitations were also sent to the trade in neighboring cities, not embraced within the jurisdiction of any of these local associations, and when the meeting convened at the time and place stated the following trade centers were represented, either in person or by proxy, viz.:

St. Louis, Chicago, Kansas City, Atchison, St. Joseph, Omaha, Lincoln, Sioux City, Council Bluffs, Des Moines, Ottumwa, Clinton, Burlington, Dubuque, Rock Island, Quincy, Peoria, Minneapolis, St. Paul, Milwaukee, Grand Rapids, Detroit, Cleveland, Toledo, Cincinnati, Columbus, Indianapolis, Evansville, Louisville, Nashville, Memphis and New Orleans.

On motion of Mr. Walding of Toledo, representing the Lake Erie Drug Exchange, it was unanimously

"Resolved, That on and after July 1, 1898, jobbers will charge manufacturers' prices for all proprietary goods."

Mr. Walbridge of the J. S. Merrill Drug Co., St. Louis, offered the following resolution, which was adopted, viz.:

"Resolved, That commencing with July 1, 1898, the jobbers send out nothing but stamped goods, and that they charge uniformly the card prices of the manufacturers at that time."

It is understood that it will be a compliance with the spirit of this resolution, where several retail packages are contained in one original wholesale package, to send the necessary stamps without attaching them to the goods.

On motion, the chairman of the Proprietary Committee was requested to urge all manufacturers who intend to change their prices, to include the cost of stamps in their list prices instead of making a separate charge for the stamps, as already suggested to them in the committee's circular of May 26, 1898.

The chairman was also instructed to request proprietors, when sending out stamped goods, to mark the outside packages with the word "Stamped," so as to enable jobbers to keep the stamped goods separate from stock on hand not stamped.

It was furthermore decided to request proprietors to send several copies of their new price lists to each jobber.

Considering the very short time permitted for the call, the meeting was representative of a large territory, and it is hoped that all sections of the country will unite in following the course outlined at this meeting.

At a meeting of the Philadelphia Wholesale Drug Association, held on Monday last, the following resolutions were adopted:

Resolved, That we hereby agree to commence, on July 1, 1898, to stamp all patent medicines, perfumes and chewing gums in our stock as sent out from that date.

Resolved, That we make our prices for domestic patent medicines, domestic perfumery and chewing gums include stamps, and on imported patent medicines and imported perfumes we shall charge stamps extra.

The Boston jobbers held a meeting on Friday afternoon for the purpose of agreeing upon some concerted plan of dealing with the case. There was a general attendance, not only of local jobbers, but those from other cities, but it was found impracticable, in view of the diversity of opinion expressed, to fix any uniform course of action for the New England Exchange. As a consequence small jobbers in that territory will stamp and others will not.

Hearing in the Alizarine Color Cases Before the Board of General Appraisers.

On Thursday at 10.30 a. m. the hearing in the matter of the classification of certain alizarine colors was taken up again. The Board of General Appraisers consisted of Judge Summerville, Mr. Wilkerson and Mr. Tickenor. Mr. Gilson, the counsel of the Board appeared for the Government and Mr. E. M. Dickerson for the importers. The Government sought to classify it for duty as a coal tar dye under paragraph 15 of the present tariff, which provides for coal tar dyes or colors not provided for in this act 30 per cent. ad valorem; all other products or preparations of coal tar, not colors or dyes, and not medicinal, not specially provided for in this act, 20 per cent. ad valorem." The importers claimed that the article should be admitted free under paragraph 469 of the free list, which exempts "alizarin, natural or artificial, and dyes derived from alizarin or from anthracin." Mr. Dickerson put his expert, Dr. Schwertz, on the stand for a short time and then rested his case. One of the main points was to determine the meaning of the term "artificial alizarin." Among other arguments advanced by counsel for the importers in support of their claims was that in a decision rendered by Judge Townsend under the tariff act of March, 1883, in which the merchandise was identical with that of the present

case, it was held that alizarine should properly be free of duty under paragraph 595, act of 1883. The language of that tariff and the present one are the same. The Government never appealed from that decision.

Mr. Gilson opened for the Government with a short statement of the case in which he emphasized that "artificial alizarin" meant the red dyestuff produced synthetically in the laboratory, in contrast to the identical dyestuff "natural alizarin" produced by nature in the madder root. He put his first witness on the stand, namely, Dr. Theo. B. Wagner, who qualified as an expert dyestuff chemist employed by the Government for this special class of work. Dr. Wagner made a very good witness for the Government, giving clear and lucid answers to the difficult technical questions. By the clever way in which he refused to be entrapped by Mr. Dickerson's ingenious questions he proved that the Government has now an expert to fight its battles who is well able to cope with such old battle horses as Dr. Morten, Dr. Chandler, Dr. Schweizer, who hitherto monopolized the expert business in organic chemistry.

It is gratifying to see that the Government's side will be in strong hands and that it will not happen any more that cases will be lost on account of lack of support and understanding on the part of the Government's witnesses.

Revenue Stamp Tax.

The Internal Revenue Collector's Office in this city has received from Washington instructions governing the issuance of tax stamps on proprietary articles, checks, drafts, legal documents, etc. The communication follows:

The Revenue Act of June 13, 1898, providing stamp taxes on the documents, articles and things enumerated in Schedules A and B of said act becomes operative as to such taxes on and after July 1, 1898. In view of the public demand for information relative to the method of procuring, affixing and canceling said stamps, the following instructions are furnished, with the request that you give the same the widest publicity possible:

Adhesive stamps of the following denominations will be supplied collectors before July 1, 1898, for sale:

Documentary stamps under Schedule A, 1, 2, 3, 4, 5, 10, 25 and 50, $1, $3, $5, $10 and $50.

Proprietary stamps, Schedule B, ⅛, ¼, ⅜, ½ of a cent and 1, 1¼, 2, 2½, 4 and 5 cents.

These stamps may be sold to any person, whether for use or resale, and when purchased in quantities of $100 or more in value at one time a discount of 1 per cent. is allowed. Whenever practicable, but one stamp should be placed upon an instrument or article; where any one stamp will not denote the tax as few stamps as possible should be affixed.

Proprietary stamps must be affixed conspicuously on the outside of the article or package, and, where practicable, so that the opening of the article or package will destroy the stamp. All such stamps must be plainly canceled when affixed by writing, or imprinting with a hand stamp the initials of the party or firm who paid the stamp and the year when affixed.

Collectors should make orders at once for proprietary and documentary stamps in quantities, and of the denominations desired, for a two months' supply.

Stamps for checks and drafts will be imprinted upon the paper or instruments in the cities of New York, Chicago, St. Louis, Atlanta and San Francisco, and it is expected that such imprinted stamps will be ready for delivery before July 1. All orders for such stamps will be made through collectors and forwarded to the stamp agent at the place where such stamps are imprinted.

If necessary the 2-cent documentary stamp may be used on bank checks, drafts, etc.

Private dies for proprietary stamps will be prepared and furnished such proprietors as desire them and comply with the provisions of Section 9 of the Act of June 13, 1898. All designs for dies and applications for stamps must be submitted to this office through collectors. All engraving will be done by the Government at the expense of the proprietors, and deposits to cover such cost of dies and the price of stamps (not less than $2,000 at one time), must be made before the stamps will be printed. Manufacturers of proprietary articles will be required to use the general proprietary stamps until stamps can be furnished from their designs.

Collectors will retain applications for private dies and stamps therefrom until regulations prescribing methods and means of securing the same are issued. The regulations relative to the stamp provisions of the Revenue Act approved 13th inst. will be issued and distributed in a few days.

The Ohio Standard Oil Inquiry.

The Attorney-General of the State of Ohio a short time ago filed a suit in the Supreme Court at Columbus to oust the Standard Oil Company from business in the State of Ohio on the ground that it was a trust. The suit was answered in the usual way, and in reply to that the Attorney-General filed some interrogatories. The Court ordered the Standard Oil Company to answer.

One of the inquiries was with regard to the number of stockholders, and the shares they hold. According to the report submitted, the following are the stockholders and their holdings in the trust: John D. Rockefeller, 9,244 shares; Martin Snider, 1; Frank Rockefeller, 1; F. B. Squire, 1; L. H. Severance, 192; Charles W. Harkness, 2,076; Wiliam Rockefeller, 467; H. M. Flagler, 1,007; Benjamin Brewster, 359; H. H. Rogers, 677; John D. Archbold, 287; W. H. Tilford, 53; Walter Jennings, 86; Esther J. Jennings, 196; Oliver G. Jennings, 85; Emma B. Auchincloss, 85; Annie B. Jennings, 85; Oliver H. Payne, 719; estate of Charles Pratt, 1,799; Helen J. Jacmes, 85; A. McGregor, 1; Lamon H. Harkness, 39; W. L. Harkness, 251. Total number of shares, 17,795.

Another of the inquiries was with reference to the number of companies comprised in the Standard Oil and the amount of money they have on hand in cash and other securities. At the time they went into the trust in 1892 the companies had sums each as follows: Anglo-American Oil Refining Company, $6,913,639.49; Atlantic Refining Company, $8,631,376.67; Buckeye Pipe Line Company, $7,941,038.15; Eureka Pipe Line Company, $1,547,055.16; Forest Oil Company, $3,528,813.11; Indiana Pipe Line Company, $2,014,053.51; National Transit Company, $25,796,712.97; New York Transit Company, $4,999,300; Northwestern Ohio Natural Gas Company, $1,396,760; Ohio Oil Company, $8,260,378.04; Solar Refining Company, $711,793.07; Southern Pipe Line Company, $3,021,654.87; Standard Oil Company, Indiana, $1,038,518.61; same, Kentucky, $3,604,800.78; same, New Jersey, $14,983,943.30; same New York, $16,772,186.29; same, Ohio, $3,426,014.72; Union Tank Line Company, $3,057,187.41.

Another inquiry was as to the dividends declared during the years they have been in operation. The witness said he could not give the dividends save as they were given out last year. Of all the companies there was but one that did not declare a dividend and that was the Union Tank Line Company. All the others declared dividends running from $29,000 to $4,000,000.

Entertainment at the N. W. D. A. Meeting at St. Louis.

The Committee of Arrangements and Entertainment has issued a programme for the coming convention of the N. W. D. A. and P. A., which is to be held at St. Louis during the week beginning Oct. 17. As will be seen by the programme, which we print below, the entire week will be given over to the convention, the banquet occurring on Friday evening instead of Thursday, as has been usual at previous meetings, and the final excursion occurring on Saturday instead of Friday. The hours set for business sesions are not stated in the programme, but they will apparently occur on Monday evening, Tuesday morning, Wednesday morning and afternoon, Thursday morning and afternoon and Friday morning. The general programme is as follows:

Monday evening, Oct. 17—Smoker.

Tuesday Afternoon, Oct. 18—Drive: Forest Park and West End residence district. Lunch at Forest Park.

Tuesday Evening, Oct. 18—Reception by Presidents Weller and Doliber in Southern Hotel parlors.

Wednesday Evening, Oct. 19—Theatre and series of receptions at private residences.

Thursday Evening, Oct. 20.—Entertainment on the river, as the guests of the St. Louis Newspaper Association.

Friday Afternoon, Oct. 21—Drive: La Fayette Park, Tower Grove Park, Shaw's Garden, Liggett & Myers Tobacco Co. and Anheuser-Busch Brewery; lunch.

Friday Evening, Oct. 21—Banquet.

Saturday, Oct. 22—Excursion and outing, as guests of the Illinois Glass Co.

LADIES' ENTERTAINMENT.

Monday Evening, Oct. 17—Meeting of the St. Louis ladies to become acquainted with visiting ladies; music and refreshments.

Tuesday Afternoon, Oct. 18—Drive: Forest Park and West End residence district; lunch at Forest Park.

Tuesday Evening, Oct. 18—President's reception, Southern Hotel parlors.

Wednesday Afternoon, Oct. 19—Country Club luncheon.

Wednesday Evening, Oct. 19—Theatre.

Thursday Afternon, Oct. 20—Matinee.

Thursday Evening, Oct. 20—Entertainment on the river as the guests of the St. Louis Newspaper Association.

Friday Afternoon, Oct. 21—Drive: La Fayette Park, Tower Grove Park, Shaw's Garden, Liggett & Myers Tobacco Co. and Anheuser-Busch Brewery; lunch.

Saturday, Oct. 22—Excursion and outing, as guests of the Illinois Glass Co.

The following sub-committees have been appointed from the entertainment committees of the two associations, or to co-operate with them:

Banquet.—C. P. Walbridge, toastmaster; O. H. Green, Clarence G. Stone, Henry C. Lewis.

Bicycle.—James Richardson, O. H. Green, E. J. Schall.

Carriages and Drives.—Frank Lawrence, L. V. Clark, Oscar Herf, Charles W. Standinger.

Clubs.—Mercantile, O. H. Green; Noonday, Edward Mallinckrodt; St. Louis, Thomas P. Haley, Jr.; University, K. Duncan Mellier; Union, Oscar Herf; Jockey Club, Thomas H. Larkin; Country Club, K. Duncan Mellier.

Finance.—Courtney H. West, Frank A. Ruf, E. J. Schall.

Headquarters.—Thomas H. Larkin, James Richardson, Henry R. Strong.

Illinois Glass Co.'s Entertainment.—Committee to co-operate and arrange: George K. Hopkins, Thomas H. Larkin, K. Duncan Mellier.

Inspection of Points of Interest.—C. P. Walbridge, Courtney H. West, Frank Lawrence.

Ladies' Entertainment.—K. Duncan Mellier, W. H. Gallenkamp, Edward Mallinckrodt.

President's Reception.—The two committees as a whole. Sub-Committee of Arrangements: Frank A. Ruf, Edward Mallinckrodt, O. H. Green.

Printing.—A. R. Deacon, O. H. Green, K. Duncan Mellier.

Publicity and Promotion.—Fred M. Odena, E. Homan, H. D. Martin, W. H. Gallenkamp, Frank S. Henry, E. D. Kenfield.

Reception.—The two committees as a whole. Sub-Committee of Arrangements: Henry R. Strong, H. D. Martin, James Richardson.

Registration.—Clarence G. Stone.

St .Louis Newspaper Association Entertainment.—Committee to co-operate and arrange: Oscar Herf, K. Duncan Mellier, E. J. Schall.

Smoker.—E. J. Schall, O. H. Green, Charles W. Standinger.

Souvenir and Badges.—Thomas P. Haley, Jr., K. Duncan Mellier, A. R. Deacon.

Theater.—Edward Mallinckrodt, Thos. P. Haley, Jr., L. V. Clark.

Weak Imitations of Mr. C. P. Calvert's Poesy.

The recent publication in the Reporter of an example of Mr. Cyrus Poe Calvert's metrical composition seems to have excited a number of his Western correspondents, who are either moved by jealousy of the recognition which has been accorded his merits or else are under the impression that a prize has been offered for the best example of poetry upon a strictly commercial theme. We are in receipt of one specimen which does not seem to bear out the latter theory, for the reason that it touches but incidentally upon commerce, and deals more especially with ethical questions which should scarcely be considered in mercantile correspondence. It is dated at Louisville, but the author's name we omit out of respect to O. K. and I. Exchange, of which he is an esteemed member, as well as to the financial institution of which he is the head. The lines are as follows:

Hold on Cy
Don't fly so high,
Before you die.
You'll hit the sky

But after that
You'll come down flat
And mash your hat
And such as that.

Then you can tell
What goods will sell
The Forth to cel-
Ebrate in ——.*

*The last word is illegible in the copy before us, but we think it is intended for Covington, Ky.—Ed. O., P. & D. R.

Lehn & Fink Get the Allen Agency.

The sale of Allen's English crude drugs and preparations has for many years been carried on in this country through a number of importers, but Messrs. George Allen & Co. now issue a circular dated at Ampthill, June 1, announcing that the sole agency for the United States has been placed with Messrs. Lehn & Fink. The line includes a large number of indigenous English narcotics, all of which are grown on the farm of the late George Allen, and which are put up in crude form in glass. The manufactured products consist chiefly of solid extracts and plant juices and include a number of special preparations for which these laboratories have been long noted. Under the systematic management of Lehn & Fink the sale of the goods will doubtless be considerably extended here.

Decision on the Appeal in the Park Suit.

The Appellate Division of the Supreme Court of this State has handed down a decision in the appeal by the John D. Park & Sons Company from an order of Judge Pryor striking out portions of the complaint in its suits against the N. W. D. A. and others. This order was granted last Fall, and, as stated in the Reporter at the time, it materially abridged the very voluminous and comprehensive complaint which the plaintiffs filed in this suit, as well as in its suit against Hubbard and others, and more recently in the Philadelphia suits. The motion of defendant's counsel was to strike out large portions of the complaint as irrelevant and redundant, and this was granted by Judge Pryor, an appeal being taken by plaintiff. The decision of the Appellate Court is written by Justice Rumsey and concurred in by his associates, Justices Barrett, Ingraham and McLaughlin. While recognizing the propriety of striking out irrelevant and redundant matter under certain circumstances, the opinion holds that such matter should only be stricken out when the moving party is actually aggrieved by it, and that the irrelevancy and redundancy must be beyond question. It also points out that in cases where equitable relief is sought great atitude must be allowed in a complaint in order that the nature of the relief sought, as well as the collateral facts which may aid in determining the precise relief required to give the complainant what he is entitled to, may be fully understood by the court.

The premises deduced from the complaint as the basis of the present opinion are that the contract plan was a scheme originated by the National Wholesale Druggists' Association into which it sought to bring all dealers by "suggestion, advice and entreaty," and when these were not sufficient, by pressure, "to the end that they could not carry on their business profitably unless they belonged to this association and complied with its rules." This pressure is described as consisting "very largely in procuring the members of the association and those under its control to agree among themselves that they would not sell the persons who refused to comply with the rules, that they would not buy from them nor sell to any other person who would not agree not to sell to these persons." These efforts were continued until the commencment of this action, and the result, as alleged in the complaint, was that plaintiff's business was seriously crippled, and it became practically impossible for it to dispose of its goods or obtain other goods with which to supply its customers. This action was, therefore, brought to restrain defendants from boycotting the plaintiff and "to restrain them from carrying into effect the various rules and regulations which they have adopted from time to time, having in view the putting of illegal restrictions upon the dealing in this sort of business for the purpose of establishing a complete boycott upon plaintiff." Viewed in this light, the court proceeds to examine the allegations necessary to be inserted in order to give the court such facts as will enable it to understand the situation of the parties; "the rules which have been made to enforce this boycott; the effect which has been produced from time to time by the application of these rules upon the persons to whom they have been addressed, and the effect upon the plaintiff's business which the existence and enforcement of these rules have caused."

The opinion admits the necessity for pointing out, step by step, the action taken by the association, from time to time, to effect the alleged boycott, al-

though much of this refers to rules established by the association before the complainant corporation was formed. But inasmuch as the object of this suit is to restrain the application of these rules to the present injury of the plaintiff, it is just as necessary to allege what was done by way of creating this boycott before the existence of the plaintiff as afterward. This disposes of a large number of the objections taken to the complaint. There are other allegations objected to which have to be separately considered, including allegations of "what was claimed by defendants." "Ordinarily," the opinion says, these "are of no importance, but when the question is whether certain things which have been done in view of the carrying out of an alleged purpose, we cannot say that it is irrelevant to show what was said by the person accused of the illegal act by way of characterizing the object with which the act was done. At the basis of this cause of action lies the allegation of a conspiracy to boycott the plaintiff's business, and as a conspiracy may consist either of a combination to do an illegal act or to accomplish a legal act by unlawful means, some of the acts which are done by the conspirators, while legal when standing alone may, if they are joined with unlawful acts and have in view an unlawful purpose to the injury of the plaintiff, become improper because they are a part of an illegal scheme." For that reason the opinion deems it not improper "to set up a claim which was made by a party as to his right to do a certain act which the plaintiff insists is injurious and his reason for doing it. For the same reason the acts of the defendants in proper conduct of their business and in securing information necessary to its proper management, although standing by themselves, they may be perfectly proper and legal, yet in connection with other acts as aids to an illegal purpose, may be improper and it may be necessary to allege them."

The same distinction is made as to the conclusions of law, and as a consequence a considerable modification of the order appealed from is permitted. At the same time the court finds that many of the paragraphs of the complaint are mere statements of evidence relied upon to establish facts and these clearly ought not to be permitted to stand. These paragraphs in the complaint and others which are simply repetitions of facts already alleged are ordered stricken out, and as a result the order appealed from is modified by permitting the following paragraphs only to stand in the complaint. "Paragraphs 1 to 26 inclusive, 36 37, 40 to 57 inclusive, 59, 60, 61, 63, 66 to 73 inclusive, 76 to 81 inclusive, 83 to 100 inclusive, 102, 125, 127, 132, 137, 138, 140, 141, 142, 145 to 151 inclusive, 153, 154, 156, 157, 158, 160, 161, 162, 165, 169, 171 to 176 inclusive, 178, 185, 189, 190, 193, 196 to 199 inclusive, 202 to 206 inclusive, 208, 209, 211 to 214 inclusive, 216, 218, 219, 227, 230, 233, 240, 242, 244, 246 to 249 inclusive, 251, 253, 287 to 289 inclusive, 318, 325, 329, 333, 355 to 358 inclusive, 372, 376 to 379 inclusive, 383 to 386 inclusive, 397, 398, 399, and as so modified the order is affirmed without costs to either party."

The plaintiff is also allowed twenty days in which to file an amended complaint in conformity with this order if it be found necessary to place it in more intelligible form.

Latest Tariff Decisions.

Soda Ash and Soap.

B. P. Ducas & Co. protested against the Collector at New York on an importation of soda ash in a powdered soap. The Board of General Appraisers found that soda ash is component material of chief value and sustained the claim that it is dutiable under paragraph 67 at one-fourth of one cent a pound, as provided for soda ash under the act of 1894.

Gallo Flavine.

The Treasury Department has been advised by the United States Attorney for the Southern District of New York of the decision by the United States Circuit Court, adversely to the government, of the case of William Pickhardt et. al. vs. Joel B. Erhardt. The merchandise involved consisted of certain so-called "gallo-flavine," a color or dyestuff coming in casks in the form of a liquid paste, which was classified for duty under paragraph 82 of the tariff act of March 3, 1883, at 35 per centum ad valorem as a coal tar color or dye. The importers protested, claiming the merchandise to be dutiable at 25 per centum ad valorem as a color or paint under paragraph 87 of the same act. In a letter to the Attorney-General suggesting that no further steps be taken in the case, Assistant Secretary Howell says: "Evidence taken on the trial of this case showed that the merchandise in question was manufactured from gallic acid, which in turn was derived from nut-galls, or other vegetable sources. The United States Attorney reports that he was, therefore, unable to sustain the claim that the merchandise was a derivative of coal tar. The court, therefore, directed a verdict in favor of the importers, sustaining their claim that the merchandise is property dutiable at the rate of 25 per centum ad valorem, under paragraph 87."

There is no doubt that the department will acquiesce in the decision of the Secretary and refunds in a number of cases will follow.

Elixir Dentifrice.

The Board of United States General Appraisers has handed down a decision on the protest of Russmann, Gallaud & Wechmar against the Collector at New York on an invoice of merchandise labelled "Elixir Dentrifice des Benedictins." It was assessed for duty as an alcoholic toilet article at 60c. a pound and 45 per cent. ad valorem, under paragraph 2, act of July, 1897, and was claimed to be dutiable as a medicinal preparation containing alcohol, under paragraph 67. The board found that the merchandise is a toilet preparation containing alcohol and overruled the protest accordingly.

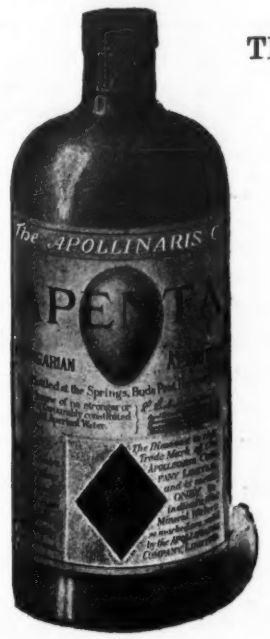
The Pioneer Pipe Line.

The sale of the old Pioneer Gas Company's plant to the American Natural Gas Company, of Alleghany, for $100,000, par value of the stock, recalls the earliest inception and practical working of a pipe line conveying gas for fuel purposes. The Pioneer Gas Company was not only the pioneer in name, but in existence as well. Almost a quarter of a century ago and a number of years before natural gas was used for domestic purposes, the Pioneer company was organized, and a five-inch pipe line laid from the big gas wells in Butler county to Spang, Chalfant & Co.'s and Graff, Bennett & Co.'s mills on the north side of the Alleghany River.

Few of the original stockholders are now living. Capt. J. J. Vandergrift was one of the promoters, and in conversation with a reporter for the Post recalled to memory some of his former associates in the enterprise. Among those mentioned were James I. Bennett, Henry Harley, Charles W. Batchelor, W. K. Vandergrift and John W. Chalfant. The last named and Capt. Vandergrift are the only surviving of those mentioned. A great many annoyances were at first experienced in operating the plant. The captain recalled one in particular. After the line had been constructed and the well connected up the stockholders on an appointed day gathered at the Spang, Chalfant & Co. mill to witness the arrival and effect of the fluid that was to supplant coal as a fuel. It was twenty miles from the mills to the well, and the man in charge at the well had been instructed to turn in the gas at a certain hour. After long hours of waiting a very little gas was noticed at the terminus of the line, but the volume was so small that it would be of no practical use in operating the big mills. A messenger was dispatched to the well to ascertain the cause, and on his return reported that the full capacity of the well had been turned into the line. The company was very much puzzled and chagrined at the result of their labor. Some thought the distance was too great, but Capt. Vandergrift and a few others tested the capacity of the well with a boiler, and found the pressure all right. They then decided to look elsewhere for the trouble. A detective was employed and sent along the line. He placed himself on good terms with the coal miners, and succeeded in getting a crowd of them drunk one night, when one of the number "peached," as the captain expressed it, and told the detective that they (the miners) had plugged the line, and took the detective with him and pointed out the different places where the plugs had been placed. The miners imagined that if gas were used for fuel they would have no employment, and took that plan to discourage the new enterprise. The plugs were inserted in the pipe before it was screwed together, and the cunning miners had taken the precaution to bore small holes through each plug, so as not to entirely shut off the pressure and convey the impression that it was was not sufficient to run the mills.—Pittsburg Post.

"APENTA"

The Best Natural Aperient Water.



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The Nutmeg Family as a Source of Kino.

The malabora is commonly called the wild nutmeg and closely resembles the true nutmeg. Its wood is sometimes used for making tea-boxes, but it is too light and soft for other purposes.

The male flowers of the Ruk are known to be very fragrant (resembling sandalwood oil), and Trimen mentions that scent is made from them, while the wood is used in boat building in the south of the island.

Irya produces wood like that of Ruk, moderately heavy, even-grained and yellowish in color.

M. fragrans, the true nutmeg tree, is now commonly met with in many places.

Other species of Myristica found in India are M. longifolia and M. malabarica. The last-mentioned is the subject of a note in the Kew Bulletin for Feb.-March and is there referred to as a source of Kino.

The product of the tree was examined by Prof. Edward Schaer of Strasburg, who has written a paper on the subject to the Pharmaceutical Journal. The following is a summary of the results of the professor's investigation:

1. The dried juice of the bark of several Asiatic species of Myristica for instance, of M. malabarica Lam., and M. fragrans, Houtt., as regards their appearance and physical qualities, show but little difference from the officinal Malabar Kino.

2. These substances, which may be termed Myristica Kinos, agree in the chemical reactions due to their constituents, in all important points, with the Kino of Pterocarpus Marsupium. It can therefore be stated the drugs of a very similar character, and partly of close resemblance to officinal kino, are to be found in the families of Leguminosae (Butea, Pterocarpus, Millettia), Saxifragaceae (Ceratopetalum), Myrtaceae (Eucalyptus, Angophora), and Myristicaceae.

3. The Myristica Kinos differ, far as can be observed from the Pterocarpus Kino, and probably also from Butea and Eucalyptus Kino, by containing, in the crude state of the inspissated fresh juice, smaller or larger amounts of a distinctly crystalline calcium salt, viz., calcium tartrate, suspended in, and depositing from, the liquid juice. By this characteristic admixture it can be easily distinguished from the officinal Kino, and probably also from other Kinos of commerce.

Whether this new substance might ever be obtained in combination with the production of nutmegs and mace, so as to play the part of a commercial drug, will depend upon a still better knowledge of its qualities, its formation in the living plant, its quantitive relations, and similar questions.

It would be interesting to know whether it would not be possible to get Kino from the succulent pericarp of the nutmeg and allied fruits (which is at present a waste product) by a process of boiling.—Tropical Agriculturist.

The Fatty Acids of Seal Oil.

The fat of the Caspian seal, examined by E. Ljubarsky, is a reddish liquid, smelling of train oil, and oxidizing on exposure to air. On decomposing the soap formed by saponification, liquid non-volatile fatty acids were obtained, the lead salts of which were partly soluble in ether, the insoluble portion yielding an acid (palmitic acid) melting at 59 deg. to 61 deg. C., and setting at 58 deg. to 56 deg. C. The unsaturated fatty acids were oxidized by alcholic potassium permanganate, and the precipitate thrown down by sulphuric acid was redissolved in boiling water, the solution yielding—on concentration and evaporation from alcohol—lustrous scales melting at 124 to 125 deg. C., and setting at 120 deg. C., and, from their composition, consisting of dioxymargic acid.

In the endeavor made to prepare the corresponding fatty acids from the oxyacids, by treatment with phosphorous iodide in presence of water, and by subsequent reduction with zinc and hydrochloric acid, stearic acid and palmitic acid were obtained.

The percentage composition of the oil was ascertained to be: solid fatty acids (presumably palmitic acid), 17 per cent.; oleic and hypogeic acids (the latter predominating), 83 per cent. It is noteworthy that the mixture of dioxystearic acid and dioxypalmitic acid formed a molecular compound with well defined properties, which in many respects (e. g., solubility in water) differed from those of the component acids.—Journal f. Prakt Chemie.

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GRINDERS OF
Turkey Umbers, Italian Siennas, Bone and Ivory Black.

PAINT MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

complete prices current will be found on page 35

Saturday Evening, June 25, 1898.

The paint situation as a whole is uninteresting. The weather has been unusually favorable for outside work and in this direction business seems to have increased during the week, but the general unsettled state of the country and the indisposition noted everywhere to embark in new enterprises as a result of the war has a depressing influence, which, under other circumstances, would not be present. The only feature of interest is the active demand for contract deliveries of lead in oil, due partly to an increased consuming demand and partly to the upward tendency of the pig lead market. No price changes of consequence were reported during the week.

White Lead, Zincs, Etc.

WHITE LEAD.—There has been a decided improvement in the distribution of lead in oil the past week, the cool and pleasant weather having stimulated both outdoor and inside painting. Then, again, there is the strong position of the pig metal, the tendency of which is toward a still higher range of prices, and if this advance is maintained it may result in higher prices on the lead products. No doubt this view of the situation has impressed itself on the minds of dealers and consumers. At least that would seem to be the case, judging by the large increase in contract deliveries, though the time does not expire until July 31. Should an advance be made in the meantime, however, buyers would be charged with the increase on the undelivered portion of their contracts. To avoid this and to meet the improved demand they are increasing their calls for deliveries. Usually at this period of the year the bulk of the grinders shut down for their annual cleaning up around their factories, but the lateness of the Spring trade on account of the stormy weather which prevailed, but is now showing itself, keeps them all busy rushing forward their stocks, which should have been distributed weeks ago. Considerable stocks of dry lead are changing hands at regular list price of 4½c. less usual discount terms. Foreign makes of lead in oil are rather quiet, though a fair amount is being consumed in a retail way, but the high prices asked deter trade somewhat. For the old established brands agents are quoting 8¼@8½c., and for those not so well known 7¼@7¾c., as to make and size of the order. For the present the various corroders continue their previous quotations, viz.: "In lots of less than 500 lbs., 6c. net; in lots of 500 lbs. and over, 5½c.; dry white lead in bbls., ½c. per lb. less than price in kegs; white lead, assorted, 1-lb., 2-lb. and 5-lb. cans (packed in 100-lb. cases), 1½c. per lb. over price 100-lb. cases, 1½c. per lb. over price in kegs; red lead and litharge in bbls. and half bbls., ¼c. per lb. less than prices in kegs; white lead in 12½-lb. tin pails (packed in 100-lb. cases), 1c. per lb. over prices in kegs; white lead in 25-lb. tin pails (packed in 100 and 200-lb. cases), 1½c. per lb. over prices in kegs. Terms: On lots of 500 lbs. and over, 60 days, or 2 per cent. discount for cash if paid in fifteen days from date of invoice f. o. b. at New York. To make either of above quantities any assortment of packages of either or all of the above articles may be counted. The above prices and terms supersede all previous prices and terms named."

RED LEAD.—The usual summer dullness has made its appearance around trade centers. Buyers as a rule are only taking such lots as their current demands require to finish up work under way. Domestic is fairly active, the bulk of the trade being contract deliveries, as many buyers anticipate a rise in values should the pig lead market continue on its upward track. So far, however, corroders give no intimation of a like action on their part, and for the present continue their previous price list. Foreign makes are rather slow at the moment, as buyers as a rule have a fair stock on hand of cheap goods, and are not disposed to anticipate their future wants at the high prices named by agents for forward deliveries. German for arrival is quoted at 7⅜@7½c., as to brand and quantity, but for spot lots a shade less is named.

LITHARGE.—The bulk of the busines at the moment is with the rubber factories, as many of the glass works are, if not already shut down, are preparing to do so for the usual summer vacation. Very little new business is reported in addition to contract deliveries, all of which are satisfied by domestic corroders at 4¾c. for car lots, less the usual discount terms.

ORANGE MINERAL.—No change in French, which remains steady at 10⅜@10½c., as to buyer and size of the order. German is without special feature and may be quoted at 8@8½c. for extra grades, as to brand and quantity. Ordinary grades are in fair request at lower prices. English is meeting with the usual jobbing demand at 8@8½c., according to quantity, brand and seller. Domestic is offered only in a limited way for spot and forward at 6¾c., less the usual discount terms.

PIG LEAD.—The market opened up strong under speculative trading at 3.95@4c., and later on in the week sales were made for spot and June at 3.97½@4.02½c., with same prices asked for July and August. At the close, however, prices eased off a trifle at 3.95@4c.

ZINCS.—Owing to the large export as well as home demand for domestic stocks, the chief maker has been obliged to start up one of their local works that has been idle for several months past, in order to keep a surplus stock on hand to meet this increased demand. Prices remain firm as named by the New Jersey Zinc Co. at 4@4½c., as to quality and quantity, less usual discount terms. Florence is in good demand both for spot and forward at 5½@6c. for green, and 5@5½c. for red seal as to quantity. German is quiet at 6@6½c. for green and 5⅞@5½c. for red seal. French is offered only in a limited way at the previous advance.

Dry Colors.

REDS.

CARMINE.—There is very little demand, only occasional small sales being reported. The tone of the market is rather easy and prices favor the buyer.

VERMILION.—There is only a retail demand for American quicksilver, but holders do not seem disposed to force business, and the market closes steady. We continue to quote 65c. for kegs or barrels, and 66c. in 30 and 50 lb. bags. These are the quotations of the combination, whose terms are 30 days, less 1 per cent. cash in 10 days. English is dull and nominal at a range of 70@90c., as to seller, quantity and quality. For Chinese there seems to

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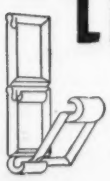

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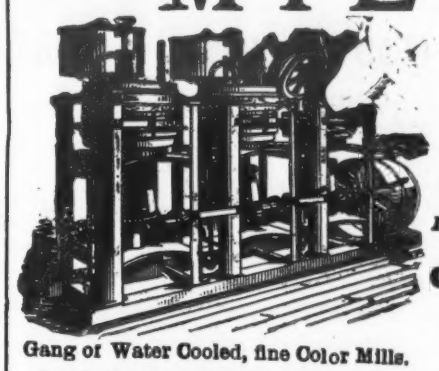

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be no demand, and prices remain nominal at 80@90c., as to quantity, though in a large way it is possible that the inside figures would be shaded.

VENETIAN RED.—There is little doing in spot goods, and we hear of no sales for forward delivery. English remains steady at the range of $1.50@1.75 for the better descriptions, $1.25@1.50 for medium, and $1@1.25 for the lower grades, as to seller, brand and quantity. Domestic is quiet and unchanged, the nominal quotations being $1@1.25 for the medium and finer grades and 75@90c. for lower qualities, according to grade and size of the order.

BLACKS.

LAMP BLACK.—There is not much demand at the moment, and the market presents a very quiet appearance. A steady feeling prevails, however, and prices are unchanged. We continue to quote 3@6c. for low grades, 8@12c. for medium, and 15c. and upward for the finer kinds, according to seller, quality and quantity. On large orders some concession might be made.

CARBON.—There is a moderate demand, but the market lacks features of special interest. There has been no change in prices, the general quotations being 15@35c. and upward for the finer grades, 10@15c. for medium, and 6@9c. for the lower qualities, as to grade and size of the order.

BLUES.

PRUSSIAN. — The market remains very quiet, present wants of consumption being small and no inducement being offered to buyers to anticipate their requirements. The steady tone of the market is maintained, and prices are unchanged at 26@30c. for domestic chemically pure and 28@30c. for imported, as to seller and quantity. The range on the lower grades is 22@24c. for domestic and 23@25c. for imported, as to brand and size of order.

CHINESE.—Nothing new is to be reported. The demand at present is light and prices are somewhat nominal, though without quotable change. We repeat our quotations of 30@35c. for the finer and 25@26c. for the lower grades of domestic, while imported is held at 32@36c. for the better descriptions and 26@27c. for the poorer kinds, according to seller, quantity and quality.

SOLUBLE.—Most buyers are being supplied through deliveries on contracts, and we hear of little new business. The market remains steady and unchanged.

BROWNS.

There is little doing in umber or sienna on the spot, and no sales for forward delivery are reported. A steady feeling prevails, however, and prices are unchanged.

YELLOWS.

OCHERS.—The demand continues light and wholly of a jobbing character. There is a steady tone to the market, however, and no price changes are to be recorded in either imported or domestic kinds.

GREENS.

Some of the makers have already stopped offering paris green, and as soon as they have their orders completed will probably shut down for the season, unless some unexpected demand should spring up. It is reported that second hands are making concessions in prices in order to work off surplus stocks. The agent for the combine so far has made no change in their quotations of 17½@21½c., as to style of packing, less the usual discount terms. The outside maker is busy making contract deliveries, and "scooping in" such orders as may come his way at 14½c. and upward, as to packing and size of the order.

Miscellaneous.

BARYTES.—We have again to report a very quiet and uninteresting market. Holders do not appear anxious and are steadily adhering to their quotations, which are $20@21 for No. 1 and $19.50@20 for No. 2 German, $18@20 for No. 1 domestic, $12@15 for No. 2, and $9.50@10 for No. 3, as to quantity, quality and seller.

CHINA CLAY.—The demand continues light, large buyers seeming to have been well supplied through deliveries from stock recently arrived. While the market is rather dull, a steady feeling obtains, and prices are unchanged at $15.50@17 for the better kinds of English, and $10@12 for the low and medium grades. Domestic remains quiet and unchanged at $8.50@9, as to quantity.

CHALK.—The market is dull, but we hear of nothing offering on the spot or for immediate shipment.

COBALT OXIDE. — Combination prices are maintained, but we hear of no business of importance.

FULLER'S EARTH.—There is little doing at the moment, only occasional small sales being reported. No change in prices is to be noted, however, the market closing steady at 82½@90c. for powdered in bags and 90c. in barrels with lump at 75@85c. in barrels as to seller and quantity.

TALC.—The situation remains practically the same as at the date of our last. Supplies are small on the spot and there is little offering for early delivery of either imported or domestic, but as the demand is limited prices are somewhat nominal. For the finer kind 1¼c. is asked, the lower grades being practically out of the market.

TERRA ALBA.—Only small lots seem to be wanted, and prices are nominal. We continue to quote 85c.@$1 for English, 80c.@$1 for imported French 75@90c. for French of domestic grinding, and 50@55c. for No. 2 American, according to seller and size of order.

WHITING.—The market remains easy under a light demand, and some

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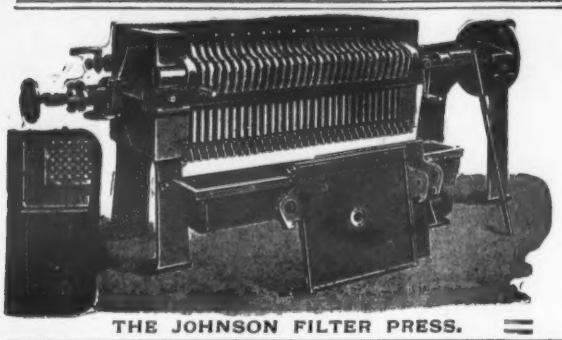
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pressure to sell, particularly in the West, where competition is keen. Nominal jobbing quotations are 35@40c. for commercial, 45@50c. for gilders' and 50@55c. for extra gilders', as to quantity. For carload lots less than the inside figures would probably be acceptable.

Metallic Paints.

There continues a fair demand, but we hear of few large orders. The steady tone of the market is maintained and prices are unchanged.

Glues.

There are no new features to report. Trade in both domestic and imported as usual at this season is dull, but stocks are reported to be small; prices are well maintained.

Glass.

The situation has not changed, jobbers reporting a dull market, with discounts unchanged. At the trade conference the manufacturers proposed last year's scale, and the workers asked for an average increase for all four trades of over 4 per cent., the main portion going to the blowers and gatherers, averaging about 6 per cent. The principal part of this 6 per cent. goes to the double thick gatherer. Nothing came of the conference, however, but the feeling prevails in many quarters that an early settlement will be made, the American Company not wishing to have the independents make an early start and reap all of the good things. Stocks in manufacturers' hands are light, but jobbers are pretty well supplied.

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26x28 to 24x36	28.75	26.75	24.00	....
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PLATE.—Trade is dull, but discounts are unchanged, the market being firm.

The Production of Glycerine in Soap Making and Its Recovery from Waste Lye.

BY LEEBERT BOYD LAMBORN.

The present active demand for this important product in the face of events fraught with such great national significance as a modern war, has in no little measure directed the attention of those who handle it commercially to its process of manufacture. One can not overestimate the influence of this simple body upon our present civilization. Our increasing indebtedness to modern chemical science can only be appreciated by imagining the state of society without the use of this one of an almost unlimited number of compounds which were originally experimental products.

Glycerine finds its most extensive use in the manufacture of nitro-glycerine, and the increased demand for this product in the manufacture of high-grade explosives explains the present encouraging outlook for this commodity. It is needless in this article to enumerate its uses. They are numberless and increasing, and its versatility in the satisfaction of so many necessities is indeed gratifying to the soapmaker in whose industry the body is a by-product.

Schule in 1779, when preparing lead plaster by heating olive oil with litharge, obtained a soluble sweet-tasting substance and later, in 1784, he found that the same substance could be obtained from other oils, as well as from butter and lard. To this material he gave the name, "the sweet principle of fats" and it afterward bore the name of Schule's sweet principle or oil sugar. Later the body was more carefully investigated by Chevreul, who determined its composition with tolerable exactitude, and gave to it the name which it now bears. Pilouge in 1836 first established its formula. His experimental results corroborated Chevreul's views that the fats are ether-like compounds of the fatty acids. Henceforth glycerine became the subject of study by Berzelius, Lubig, Berthelot and de Luca; but it remained for Wurtz to determine its exact chemical composition and relation to other bodies of the allphatic series.

Schule describes his method of preparation in the following terms: "It is not generally known that all solid oils obtained by pressure contain a natural sweet principle which differs in its special relations and properties from the other well-known saccharine materials occurring in the vegetable kingdom. This sweet principle makes its appearance when oils of this kind are boiled with litharge and water until the whole of the litharge is dissolved by the oil. Water is then poured upon the 'emplastrum simplex' thus formed, the whole boiled for a few minutes, and on cooling the liquid is filtered off from the plaster and boiled until the residue becomes syrupy.'"

Glycerine was prepared by this process alone for many years, the lead introduced as an impurity from the litharge being removed before concentrating the filtrate by the use of sulphuretted hydrogen. This concentrated filtrate, after some primitive clarification, constituted the glycerine of commerce. Its rapidly increasing use soon demanded its production upon a larger scale. It was known that in the process of soap making the glycerine liberated from the fat in the act of saponification remained in the waste lye, but efforts to recover it from this medium with the extremely crude methods employed were unsuccessful. In the mean time the manufacture of stearine candles was undergoing important developments. Numerous patents were granted for processes for the decomposition of fats and the separation of glycerine. Gay Lussac and Chevreul in 1825 were the first to obtain patents. Their patent was for the alkaline saponification process, which, however, did not admit of successful operation until after the improvement by de Milly in 1831. This is the autoclave process at present in use.

During the succeeding twenty years the sulphuric acid distillation process was proposed and developed. Although other investigators had worked with the problem, and in fact a form of the process was in actual use by the predecessor of the Price's Patent Candle Company, it remained for an American chemist, R. A. Tilghman, to determine the conditions productive of the most successful results. For his originality he received a patent in 1854, having previously filed a caveat. An English patent was soon after taken out. Tilghman's process is that at present employed in conjunction with the use of sulphuric acid, and consists, briefly, in distilling the mixture of fat and acid in a current of superheated steam and collecting the distillate in suitable condensers, where the fat acids and sweet-water containing the glycerine separate into two well-defined layers. The sweet-water is drawn off and concentrated. By the autoclave process a larger percentage of glycerine is obtained than with the distillation process; also a smaller percentage of tarry matter. On the other hand, the distillation process yields a larger percentage of solid, fatty acids. The autoclave process is the more extensively employed. In the processes briefly described the production of glycerine became comparatively easy, and the manufacture of candles and glycerine was carried on together. Social progress with increasing intelligence meant a correspondingly increased demand for "night lights" and the industry thrived. Soapmakers' lyes as a source of glycerine were neglected, and almost fabulous wealth was sacrificed to tardy ingenuity.

In 1847 Sobrero in Paris discovered nitro-glycerine. Alfred Nobel demonstrated its value as an explosive in 1863, and in 1866 invented dynamite. This was followed in 1875 by blasting gelatine. The construction of vast engineering undertakings was greatly facilitated by the use of these substances, of which glycerine is the basis. Their increased use reacted directly upon the source of the raw material, and the soap trade soon came to a perplexing realization of the increasing value of the product being daily consigned to the sewer.

To more clearly understand the formation of glycerine in soap-boiling and its fractional separation from the soap in the withdrawn lyes, it would be well to consider the variety of fats and oils employed chiefly in American practice, their several glycerine contents and the change common to all which they undergo in saponification, or "killing the stock." In tracing a boil of settled soap from its inception to the withdrawal of the final lye previous to the beginning of a new boil, the writer hopes to be able to indicate in a fairly accurate manner the proportion of the total glycerine produced which is contained in the several lyes.

The fat of beef from time immemorial has been the chief raw material of the soapmaker's art. It occurs on the market in three general grades, viz., tallow, bonestock and grease; the quality depending upon the source, mode of preparation and the esason. In determining the quality, buyers as a rule depend merely upon the simple organolepter tests of color, grain and odor, supplemented by the titre, or hardness.

In soap factories provided with laboratory facilities the melting point, per cent. moisture and per cent. free fatty acids are ascertained. The last determination is of especial importance when the stock is considered with relation to its yield of glycerine.

Cottonseed oil in the past twenty years has assumed increasing importance as a soapstock. Western soapmakers early appreciated its value when used in judicious admixture with firmer material. Its use now in soap making is universal, and with every year an increasing quantity finds its way to the soap kettle.

Cocoanut oil, of all fatty bodies used in soapmaking, is richest in glycerine. Its use in this country is increasing from the deserved popularity of white floating soap of which it is a necessary and essential ingredient.

Corn oil, obtained from the germ of the corn kernel, which is a useless constituent of the corn in the manufacture of glucose, starch and spirits, has not

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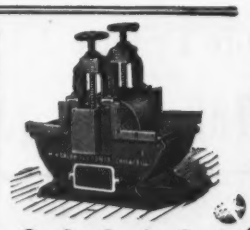

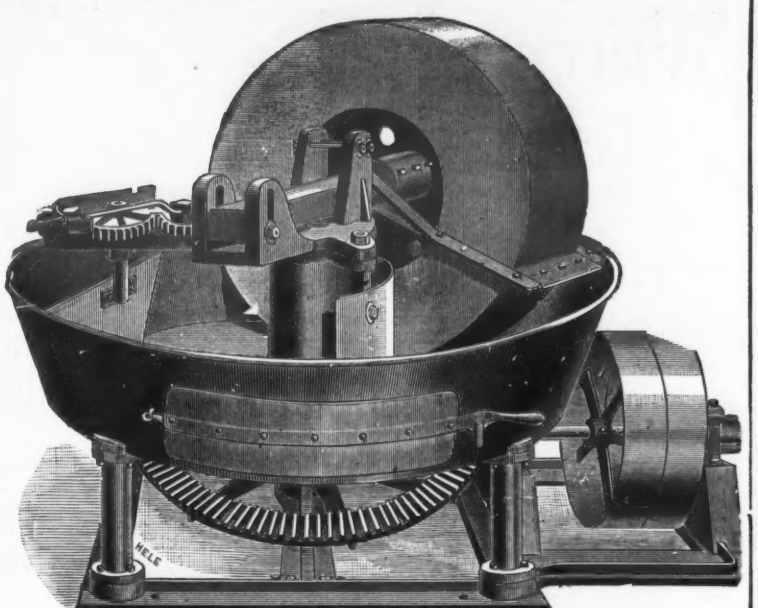

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as yet won general use as a soap stock, although its value in soap making is recognized. Red oil, as a by-product in the manufacture of stearic acid in the candle industry, does not concern us in this sketch, as it is almost wholly oleic acid, and hence useless as a producer of glycerine. Moreover, its use is yearly being limited not only by the competition of cotton oil, but also by the gradually decreasing demand for stearine candles, which product has also been limited in use by the introduction of the paraffin article.

Tallow is composed of about 61 per cent. stearine, 33 per cent. olein, and 6 per cent. palmitin. The varying complexity of fats and oils in their glyceride constituents, aside from their deterioration as glycerine producing bodies in the processes of collection, rendering, refining, etc., forbids any exact statement of their theoretical percentages of glycerine. The theoretical yield of glycerine from stearine, olein and palmitin is respectively 10.34 per cent., 10.41 per cent., and 11.42 per cent. In practice, however, there is considerable loss, as will be shown, and the figures stated are never reached. The free fatty acid in tallow and, in fact, in all soap stock, is assumed to be oleic acid and is calculated as such in the chemical method for its determination. Olein, being less stable than its associated glycerides, admits of more ready decomposition and liberation of glycerine. The following causes conducive to a high percentage of free fatty acids in the various grades of tallow may be enumerated:

1. Allowing fat to stand before rendering, especially in warm weather. After death of the animal, decomposition immediately sets in and the first step in the decomposition of tallow is the separation of the fat anhydrides from glycerine.

2. An excessively high temperature in rendering increases the amount of free fatty acids. The presence of water in the tissues and the influence of a high temperature in the rendering tank tend to the hydrolysis of the glyceride.

3. Rendering in closed vessels increases the percentage of free fatty acids. It is clear that there prevail here conditions that are purposely introduced and maintained in the saponification process for the manufacture of fatty acids and glycerine.

It is therefore evident that the percentage of free fatty acid is a reliable index not only of the quality of the stock used by the renderer, but a telltale upon the care which he has employed.

It is important that we should clearly understand the significance of the free fatty acid percentage as an index of the amount of glycerine lost in the manufacture of tallow. Since the free fatty acid is oleic acid, a molecule of the glyceride olein will serve the purpose of explanation. The molecular weight of olein is 884; the molecular weight of glycerine is 92; the molecular weight of oleic acid is 282. These numerical relations become clear on a study of the graphical representation of the olein molecule.

Olein, 884. Water, 54.

$$C_3H_5\text{—}O.C_{18}H_{33}O + 3\ H_2O =$$
$$O.C_{18}H_{33}O$$

Glycerine, 92. Oleic acid, 846.

$$C_3H_5\text{—}O.H + 3\ C_{17}H_{33}O.C00H.$$
$$O.H$$

The separation of a glyceride into free fatty acid and glycerol is always accompanied by an absorption of water as is indicated in the preceding equation; 54 parts of water combining with 884 parts of olein to form 92 parts of glycerol and 846 parts of oleic acid. Thus 100 parts of olein in saponification yield 95.7 parts of oleic acid—or soap, if saponification be effected by an alkali, and 10.4 parts of glycerol.

Amounts of glycerol and fatty acids theoretically obtainable from 100 parts of the tri-glycerides named:

Tri-Glyceride.	Chief sources.	Yield on saponification of 100 parts. Fatty acids. Parts.	Glycerol. Parts.
Stearin	Tallow and lard	95.73	10.34
Olein	Tallow and lard	95.70	10.40
Palmitin	Tallow and palm oil	95.28	11.41
Laurin	Cocoanut and palm kernel oils	94.04	14.42
Myristin	Cocoanut and palm kernel oils	94.47	12.70
Butyrin	Butter fat	87.44	30.46
Linolein	Linseed and drying oils	95.21	11.58
Recinolein	Castor oil	95.92	9.88

If a sample of tallow indicates on analysis 10 per cent. of free fatty acid there is a remainder of 90 per cent. of neutral fat, indicating approximately a loss of 1 per cent. of glycerol on a basis of the fat, or 10 per cent. calculated on the total amount of glycerol theoretically available. The extremely variable percentage of free fatty acid in tallow is patent to every soap chemist. The statements made with reference to tallow are also applicable to bone stock and grease, and here the loss in glycerol before the fat becomes the raw material of the soap maker is much greater. The following table is compiled from the results of free acidity determinations in the soap stock mentioned. Each per cent. is an average of a large number selected at random and covering the season indicated:

Soap stock.	Per Cent. Free Fatty Acids. Winter.	Summer.
Tallow	7.85	5.85
Bone stock	10.68	6.64
Grease	18.03	7.49

The sole value of this generalization lies in showing the relative influence of two seasons, with the conditions peculiar to each, upon the quality of these grades of stock.

Cottonseed oil is happily exempt from such criticism. The Produce Exchange requirements for choice crude limit the free fatty acid content to a maximum of 1 per cent. Cottonseed oil is composed of olein and palmitin, with smaller amounts of stearin and linolein. To the oxygen-absorbing capacity of the latter glyceride is due the semi-drying propertyof the oil. The relative proportion of these glycerides in cottonseed oil is subject to more or less variation, not only according to conditions, but also to the geographical origin of the plant. The summer yellow oil for soap makers' use yields in the kettle about 9.5 per cent. of glycerine.

Cocoanut oil and palm kernel oil, in their chemical constitution and behavior during saponification, are very closely related. Both are characterized by a high percentage of the volatile fatty acids, caproic, caprylic, capric, lauric and myristic. They liberate more glycerol than any other oil used in soap making, which is in harmony with their high absorption of alkali. In its content of free fatty acids cocoanut oil is subject to wide variation. It soon becomes rancid on exposure, the development of rancidity being always accompanied by liberation of glycerol. This tendency to become rancid readily is due to the high percentage of the glycerides of fatty acids of low molecular weight, between the fat anhydride and glycerol, of which there is a comparatively weak affinity. From its mode of preparation a higher free acidity would be expected in coprah than in cocoanut oil. The average free acidity of a number of lots of coprah oil was 8.40 per cent.; a similar average of cocoanut oil, Ceylon quality, was 7.15 per cent.

Cocoanut oil of good quality for soapmakers' use is considered to liberate in the kettle about 12 per cent. of glycerol. We have considered cursorily the more common fats and oils employed in soapmaking in this country with reference

(Continued on Page 26d.)

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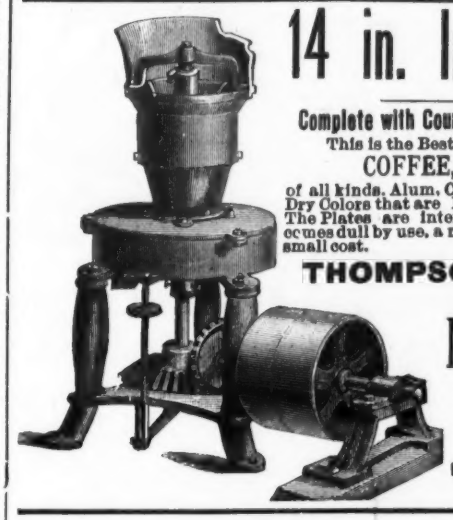

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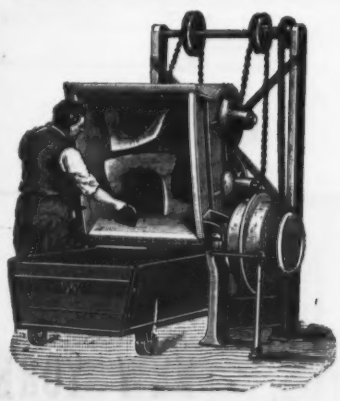

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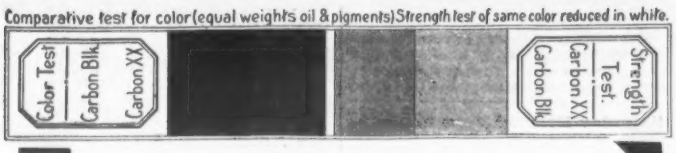
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LINSEED CAKE

Varnish Oil a Specialty

OIL MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on page 35*

Saturday Evening, June 25, 1898.

Vegetable Oils.

LINSEED OIL.—The market is rather demoralized, continued light demand and a material break in seed having led to a little more pressure to sell on the part of some of the out-of-town crushers. Chicago quotations are down to 37@40c., with oil reported procurable at 36c. This would make the equivalent price here 39c. or under, and while we hear of nothing offering at that figure, bids of 38c. have been solicited for July-August. As will be seen, it is impossible to tell just what could be done on car load lots, except on a firm bid. The lowest price reported on actual sales of out-of-town makes is 41c., but this will buy in small lots. City crushers hold to previous quotations, but it is probable that a reduction will be made early in the week, as the present margin between their prices and those at which out-of-town makes are selling is too wide to be maintained.

COTTONSEED, REFINED.—The continued depression in provisions, in the absence of any export demand, has gradually had the effect of converting some holders who had previously been sanguine of an early improvement, and while many are still hopeful of an early recovery of prices, their temper has been sorely tried by the violent fall in the price of tallow and the absence of the demand for lard. That, in view of these conditions, the feeling of the trade is not positively pessimistic, is to be attributed to the conviction that general trade conditions are good, and that the situation contains the possibilities of a recovery as sudden and as sharp as the decline has been. There is very little export inquiry in the market, and probably none will come along until the foreign markets have been cleared of the surplus stocks which are depressing those centers at the moment. It is estimated that at 23½c. for a prime or nearly prime yellow business could be done for July-August, and it is barely possible a shade higher would be paid for a round lot. There have been freer offerings of oil at New Orleans at 21½@22c. for off yellow, with sales reported of 1,000 bbls. for July at 22c. f. o. b. The high rate of ocean freights from New Orleans and Galveston restricts trading except at low prices. There has been a slight improvement in the demand for crude from the West, and sales have been made of a limited quantity in the Valley at 16½c. and Memphis at 17½c. The market here for crude is dull at 19@20c., according to quality. The drop in price of white oil so far has failed to attract buyers, though sales of 700 bbls. in lots are reported at 29c. To-day the market was rather steadier, in sympathy with tallow, which took a turn for the better, though lard showed considerable weakness. While 24@24½c. is asked for summer yellow for prompt, it is doubtful if one had oil on dock with instructions to sell if better than 23c. could be done. The indications are that we shall have a dull trade from now on, with an occasional spurt, only to relapse again to its usual state of quietness, until the summer is over. Possibly if the war should end suddenly and confidence again be restored, business would revive in all branches and none would feel its effects more quickly than cotton oil and the provision trades. Until then the market is simply a waiting one.

EXPORTS OF COTTONSEED OIL FROM NEW YORK, BY COUNTRIES, IN GALLONS.

	For week ending June 24, 1898.	Since Sept. 1, 1897.	Same time last year.
Africa, Algiers	....	504,558	316,358
Egypt	....	28,350	40,000
South	....	2,807	....
Tunis	....	2,500	....
Argentine Republic	1,288	16,482	17,953
Australia	9,076	65,677	36,396
Austria	98,050	2,874,869	1,526,359
Belgium	....	122,062	118,260
Brazil	2,000	808,140	504,842
British Guiana	1,560	75,497	55,765
British W. Indies	1,750	276,637	276,256
Canary Islands	....	....	838
Central America	....	1,580	....
Chili	....	7,994	716
Cuba	....	9,774	2,436
Danish W. Indies	255	14,811	4,060
Denmark	....	54,768	87,850
Dutch Guiana	....	311	511
Dutch W. Indies	....	129	1,156
Ecuador	....	5,066	....
England	1,250	942,263	766,713
France	169,349	7,548,323	5,777,773
French Guiana	500	967	305
French W. Indies	15,522	367,069	345,212
Germany	....	601,127	361,958
Gibraltar, f. o.	....	....	229,381
Hayti	....	....	459
India	....	300	300
Italy	91,567	2,268,386	648,259
Japan	....	500	....
Malta	....	5,000	....
Mexico	2,147	48,952	41,904
Netherlands	54,750	909,147	466,957
Newfoundland	....	26,700	28,934
New Zealand	....	....	2,187
Nova Scotia	....	162	....
Norway and Sweden	....	7,500	31,250
Peru	....	....	1,205
Porto Rico	....	....	20
San Domingo	1,938	66,613	35,542
Scotland	....	208,056	103,708
Uruguay	12,658	173,345	114,260
U. S. Colombia	1,510	14,874	10,557
Venezuela	....	923	3,879
Totals	465,170	18,061,219	11,923,464

EXPORTS OF COTTONSEED OIL FROM NEW ORLEANS, BY COUNTRIES, IN GALLONS.

	For week ending June 24, 1898.	Since Sept. 1, 1897.	Same time last year.
Austria	....	1,388,550	115,000
Belgium	....	76,000	122,500
Central America	....	500	....
Denmark	....	190,000	47,500
England	....	778,550	104,350
France	....	2,521,300	3,612,450
Germany	....	328,500	444,950
Gibraltar	....	....	128,500
Ireland	....	56,250	....
Italy	....	12,500	7,500
Mexico	....	5,000	....
Netherlands	200,000	1,349,750	1,510,352
Totals	200,000	6,706,400	6,092,802

EXPORTS OF COTTONSEED OIL FROM BALTIMORE, BY COUNTRIES, IN GALLONS.

	For week ending June 24, 1898.	Since Sept. 1, 1897.	Same time last year.
Belgium	83,000	340,250	....
Brazil	....	....	1,022
England	....	70,500	....
France	....	12,000	15,000
Germany	....	365,697	4,900
Ireland	....	26,000	....
Netherlands	....	343,010	473,620
Scotland	....	130,600	30,800
Totals	83,000	1,288,057	525,342

EXPORTS OF COTTONSEED OIL FROM GALVESTON, BY COUNTRIES, IN GALLONS.

	For week ending June 24, 1898.	Since Sept. 1, 1897.	Same time last year.
Austria	....	195,000	242,500
Belgium	....	60,199	....
Denmark	....	2,500	12,500
England	....	58,400	110,000
France	....	2,749,919	....
Germany	....	128,450	269,750
Italy	....	10,000	....
Mexico	....	546,307	528,921
Netherlands	....	1,887,400	1,954,585
Totals	....	5,648,175	3,118,196

Chas. B. Tainter & Co.'s Circular.

New York, June 25, 1898.

The market for cottonseed oil is still remembered by the trade, but when it again is in evidence it will be as strange as Rip Van Winkle after his long sleep. We do not mean by this that prices will be necessarily lower, but that for the present neither buyers nor sellers see their way clearly, and therefore neither care to commit themselves. Some little trading has been done in prime summer yellow for July delivery at 25½c. f. o. b., but exporters generally look for lower figures. Holders are equally confident of better values, based on smaller stocks than last year. Chicago July options for lard are rather weak at 6.65c., while tallow here is decidedly weak at 3¼c. Receipts of cotton oil at this port for the week, including through shipments for export, are 2,870 bbls.

Cocoanut Oils, Etc.

CEYLON.—The depressed condition of the tallow market so far has had no perceptible effect on this article, which holds its own remarkably well when the dull state of general trade is considered. Only small sales, however, such as current wants require, are be-

HOPKINS, DWIGHT & CO.

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COTTONSEED OIL

AND

Southern Produce.

Commission Merchants.

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Also execute orders for Grain and Provisions both in the New York and Chicago markets.

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LOUISVILLE, KY., U. S. A.

Refiners of All Grades of

COTTONSEED OIL

"ECLIPSE" BUTTER OIL. "SNOWFLAKE" PRIME SUMMER WHITE.

SUMMER { White C/S Oil. Yellow C/S Oil. WINTER PRESSED { White C/S Oil. Yellow C/S Oil.

SUMMER AND WINTER WHITE "MINERS'" OIL.

YELLOW AND WHITE COTTONSEED STEARINE:

CRUDE C/S OIL. "RED STAR" SOAP. SOAP STOCK.

TANK CARS FURNISHED FREE FOR SALES OR PURCHASES.

SPECIALTIES:

"SNOWFLAKE" PRIME SUMMER WHITE. This oil is prepared especially for Lard Compounders; is sweet and wholesome, being bleached without a particle of acid. A trial means you will use no other.

"ECLIPSE" BUTTER OIL. A strictly choice Vegetable Oil, selected and prepared especially for Butter Manufacturers; equaled by none other for quality and uniformity.

"DELMONICO" COTTON OIL. This brand of Cooking Oil needs no introduction; speaks for itself, and for Culinary Purposes is synonymous with finest.

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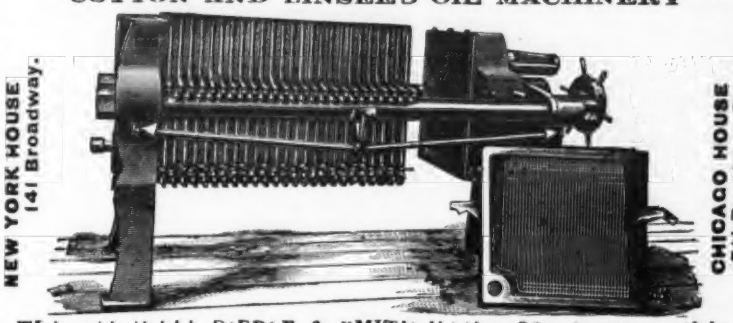

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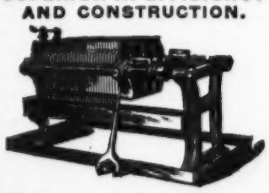

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PLANTERS NEW ORLEANS
SUN BRAND
EMPIRE SALAD OIL

ing made from store at 5¼@5½c., according to package and seller.

COCHIN.—The recent arrivals by steamer will have no material effect on the market, as the bulk of the cargo was sold previously for consumption in the West. Only a small portion will come on the market for resale, for which 6c. is asked, with intimations if it will not bring 5¾c. it will be stored. Small retail sales are being made from store at 6⅛@6¼c. for small packages.

CORN.—In sympathy with the depressed condition of the grease market prices for export lots have eased off to some extent. Sales are reported of 10 cars at 3c. At the close they were asking 3.10c. for car lots and 3¼c. for jobbing parcels.

OLIVE.—There is no change in the situation except that choice green oil is scarce and commands full prices of 57 @58c. Yellow is easier at 54@55c. for spot and at 50c. for lots on way. Shipments may be done a shade less. Olive foots are hard to sell and may be quoted nominal at 4¼@4⅜c., as to quality and seller.

PALM.—Only a small retail demand is reported for red at 4¾c. and for Lagos at 5c. For arrival a shade less could be done for a round lot.

RAPE.—The market is easy for a choice quality at 59@61c., as to quantity and seller. Ordinary grades are dull at 54@56c., as to quality.

Animal and Fish Oils.

COD.—Dealers report trade as continuing very dull, but prices remain firm at 35@37c. for domestic and 40@42c. for Newfoundland.

DEGRAS. — Notwithstanding that there is reported to be an improvement in the leather business, the demand for degras continues light. Prices are firm, however, at 2@2½c. for German and 2⅛ @2⅜c. for English.

LARD.—The market for the raw material has continued depressed throughout the week, and this has caused a feeling of weakness in oil, there being free sellers of prime at 49c., though for some makes 51@52c. is asked, as to quantity. There is very little demand, buyers holding off in anticipation of still lower prices, while there is also usually a lull in trade at this season. The lower grades are not quotably changed, but are weak and dull.

MENHADEN.—Reports from the fishing fleet continue satisfactory, the catches being fair, while several of unusual size have rewarded the fishermen. The Northern fleet of vessels has been sent to different points, some going to Delaware waters, while others are reported to have been sent to the coast of Maine. Some sales of new oil are reported, both for export and home use, but prices realized are withheld, and it is uncertain what to quote, although 20 @24c. will probably cover the range, as to quality, some good Southern being offered at 21c. For bleached there is only a moderate demand at unchanged prices.

NEATSFOOT.—Trade has been very dull and prices, while not quotably lower, are weak.

RED.—Although the demand continues light and tallow is lower, makers of saponified adhere to previous quotations of 3¾@4c., as to quantity, as production has about ceased for the season. Elaine is quiet and steady at 28@32c., as to quantity.

SPERM AND WHALE.—There have been no sales of crude and the situation is unchanged. Bleached are dull and steady.

Mineral Oils.

BLACK. — Trade has been rather quiet, although moderate lots of summer are being taken on contracts. Outside lots are still on offer at 5½c. cash, but the market is not affected thereby, and sales are being made at 6@6⅛c.

CYLINDER STOCKS.—There is only a moderate movement, but the cheaper grades have received attention, the difference in price proving an attraction. There have been comparatively few offerings of outside lots, and on these prices are made as to quality and the ideas of owners.

NEUTRAL.—There is a steady movement in a jobbing way, and occasional round lots are called for, but the volume of business is approaching summer proportions. Prices are steady.

PARAFFINE.—A moderate demand is reported, there being a noticeable falling off in orders, although the movement is still of goodly proportions, and prices continue steady.

SPINDLE.—Dealers report a very light demand, only occasional fair orders being received, while the outlook is not regarded as very encouraging. Prices are steady on all grades.

Oil Meal, Cake, Etc.

There is no demand for linseed cake, and the market is easier, although offerings are not free. State and Western cake is obtainable at $20 here, and the same figures are quoted at Baltimore. Cotton cake is rather easier at the South, with $18.50@19 quoted for cake and meal f. o. b. New Orleans. About 1,000 tons cake have been sold there on a c. i. f. basis for Liverpool, equal to about $22 delivered at the latter port.

Wax, Lard, Tallow, Etc.

PARAFFINE WAX.—Naturally, following the very large shipments reported last week, there has been a falling off, the amount during the past week barely reaching 1,000,000 lbs. from this port. There is no change in the situation, with, however, less difference in the views of shippers and pressers, the latter continuing to quote 124@126 m. p. at 2¾c. As there is no demand, except for special lots and grades to meet special requirements, very little business is being done, and it appears difficult to place outside lots. The principal holders quote crude at 3@3¾c. for 117 m. p. and 3½c. for 124@126 m. p. We quote refined at 4½c. for 125 m. p., 5c. for 130 m. p. and 5½c. for 135 m. p. For 140 m. p. 10@11c. is asked.

LARD.—The market for options stiffened a little following the close of our report on Saturday last, and closed at Chicago at 5.72½c. for July and 5.82½c. for September, with cash lard at 6@ 6.05c. for Western and 5⅝@5⅝c. for city. On Monday the market opened firmer, and, although there was no activity, there was enough support from trades to force an advance of 7½ points during the day. There was a further gain at the opening on Tuesday, but there was a break later, to be followed by a partial rally, and at a net loss of 5 points for the day. On Wednesday with heavier receipts of hogs there was a break at the opening, but a good portion of this was recovered later under heavy trading, and the net decline was 2½ points. Thursday's market was a fluctuating one, and a fair amount of trading was done, but there was a loss of 5 points, and yesterday another 5 was knocked off the quotation early in the day, with little business recorded, but half of this was recorded later, the close being at 5.65c. for July and 5.75c. for September.

The market opened to-day at yesterday's closing, but lost 2½ points, and at noon was quoted at Chicago 5.62½c. for July, and 5.72½c. for September. Cash lard closes at 5.90c. for Western in tierces here, and 5⅛@5¼c. for city.

Refined lard has been dull and the whole range of quotations is unchanged. We quote export packages 6.25@ 6.75c.; compound, 4½@4¾c., and neutral 6¼c.

TALLOW. — Though demoralization has characterized the market during the greater portion of the week, there was a break early in the week from 3½ to 3¼c., without more than 100 hhds. selling, after which the market took a further drop to 3⅛c., at which price 200 hhds. more were taken for the continent. When this point was reached, buyers for continental account came in more freely and took all of the offerings, and 3⅛c. is now bid without sellers, the latter holding at 3¼c. or better. The sales have amounted to 750 hhds., including the contract deliveries, which are all that has been taken by the home trade, and included in the transactions are 200 hhds. extra quality at 3¼c., 3 5-16c. and 3⅜c. for special brands. The sales also include 1,500 tcs. to be made, on a basis of 3⅛c. for hhds. Buyers are now trying to effect contracts for July-August deliveries on the present basis. The demand for edible grades has also been good at about 4c. in tierces. Business in country lots is reported moderate, but several lots have been picked up at 3⅛@3½c., as to quality.

At the outports a fair amount of business has been done, while the Western markets have been comparatively steady and a number of sales of prime packers have been made at 4c. with No. 2 quotable at 3c. for best grades.

The soap trade here shows absolute apathy, and no greater requirements at 3½c. than they did at 4⅛c.

Nothing was sold at London, buyers there being out of the market by agreement until holders of Australian lower their asking rates.

The activity here toward the close has imparted a better tone to the market, and after the rapid decline of 1c., it is expected that there will be some reaction.

STEARINE.—Trade has been restricted, and the market has ruled easy but at a break in prices there has been a little more disposition to buy at the close, and 100,000 lbs. of oleo are reported at 5c. For lard stearine the demand has been very slack and the market is easier, city and Western being quotable at 6⅝@6¾c., and rather nominal in the absence of business. In grease stearine there have been sales at 3⅝c. for yellow at Chicago, but the market is dull.

GREASE.—There has been a very limited demand, but prices are fairly well sustained, although on the lower grades easier quotations are reported from the West. We quote: City white, 3⅝@4c.; yellow, 2¾@3c.; brown, 2⅛@ 2⅝c.; bone and soap, 2¾@3⅛c. At Chicago, A white, 3¾c.; B, 3¼c.; yellow, 2⅝@2¾c.; brown, 2⅜c.

The Price of Lard in Chicago.

June.	Cash.	July.	Sept.
18...	5.75 @5.77½	5.72½@5.77½	5.82½@5.90
20...	5.72½@5.80	5.70 @5.82½	5.82½@5.92½
21...	5.75 @5.80	5.75 @5.80	5.85 @5.92½
22...	5.70 @5.72½	5.65 @5.72½	5.75 @5.82½
23...	5.67½@5.70	5.45 @5.75	5.75 @5.85
24...	5.62½@5.67½	5.62½@5.65	5.72½@5.77½

TOTAL IMPORTS AT NEW YORK.

In the following table we give the total imports, in packages unless otherwise specified, and their values, at the port of New York for week ending June 24, 1898:

	Quantity.	Value.
Bottles	....	$2,953
Glass, plate	11	1,174
Glass, window	5,792	8,201
L. G. plates	93	8,735
Annatto	4	161
Arsenic	50	634
Acid, benzoic	30	1,295
Acid, carbolic	138	4,629
Acid, citric	216	525
Acid, salicylic	50	1,542
Acid, all other	110	2,955
Aniline colors	847	53,410
Aniline salts	104	8,567
Ammonia, muriate of	57	1,808
Alum	2	27
Argols	1,301	65,260
Albumen	110	4,972
Alizarine	154	10,372
Alizarine assistant	20	364
Asphalt	....	6,422
Balsam, copaiba	33	1,001
Balsam, tolu	25	760
Bark, Peru	16	311
Bark, all other	163	675
Barytes, carb.	250	609
Bay rum	61	574
Bleach powder	954	7,992
Bronze powder	....	6,251
Butter, cocoa	50	1,720
Chalk	....	1,057
Chemical salts	131	3,352
Citrate of lime	93	3,409
Civet	1	34
Cobalt	7	1,191
Cutch	33	511
Cuttlefish bone	40	189
Dragon's blood	3	127
Dextrine	397	2,267
Dyewood, extract of	53	1,878
Fish sounds	9	167
Flowers, chamomile	30	240
Fuller's earth	300	237
Gambier	1,406	6,516
Gelatine	71	2,196
Glycerine	245	15,474
Gum, aloes	348	1,040
Gum, benzoin	4	155
Gum, chicle	11	189
Gum, copal	345	2,041
Gum, camphor	1,104	34,742
Gum, damar	123	869
Gum, gamboge	40	648
Gum, kowrie	36	892
Gum, shellac	225	4,309
Gum, tragacanth	19	1,330
Gum, all other	2	38
Glue	369	27,353
Insect powder	10	180
Indigo	150	21,604
Isinglass	2	399
Manganese	3	73
Manganese ore	10	191
Manure salt	....	15,340
Mica	78	1,271
Nutgalls	128	3,228
Orchilla liquor	10	1,466
Oil, anise	38	4,032
Oil, bergamot	86	3,509
Oil, fusel	30	998
Oil, lavender	1	26
Oil, lemon	244	5,419
Oil, orange	60	2,545
Oil, olive	2,512	16,098
Oil, rose	1	3,353
Oil, thyme	1	45
Oil, other essential	16	3,837
Oil, all other	1,583	7,634
Opium	12	4,263
Paints, unspecified	....	13,052
Paints, drop black	13	204
Paints, iron oxide	31	752
Paints, ocher	400	1,351
Paints, sienna	5	144
Paints, vermilion	29	1,920
Paints, white lead	4	57
Potash, chlorate	1,069	7,063
Potash, carbonate	88	3,118
Persian berries	9	127
Potassium, cyanide	30	1,699
Potato starch	500	2,202
Plumbago	21	749
Quinine	189	23,213
Root, rhubarb	47	1,459
Root, sarsaparilla	20	277
Root, all other	83	1,137
Senna	78	1,216
Sizing	10	193
Soda, ash	243	1,656
Soda, bichlorate	10	431
Soda, carb.	56	173
Soda, caustic	300	2,633
Soda, nitrate	31,192	78,483
Soda, sulphide	18	167
Sponges	73	2,359
Stearine	25	272
Sumac	410	1,009
Sumac, extract of	10	192
Talc	200	179
Tonca beans	1	86
Ultramarine	65	1,899
Vanilline	10	2,584
Vanilla beans	24	6,977
Varnish	70	2,806
Other	....	31,860
FURS, ETC.		
Furs	389	97,955
Fur waste	155	2,396
Hatters' goods	3	141
FRUITS, ETC.		
Bananas	....	25,745
Citron	....	5
Currants	....	4,708
Dates	....	1
Fruit juice	....	63
Figs	....	6
Lemons	....	152,938
Nuts, almonds	....	6,195
Nuts, Brazil	....	3,006
Nuts, cocoa	....	12,143
Nuts, filberts	....	32,859
Nuts, walnuts	....	4,456
Nuts, all other	....	595
Olives	....	1,210
Oranges	....	244
Pineapples	....	2,321
Sardines	....	4,396
Sauces, preserved	....	25,217
Bristles	81	11,291
Rennets, preserved	108	1,955
Dutch metal	2	48
Lead, pigs	17,725	149,586
Metal leaf	4	768
Cassia	5,001	21,753
Ginger	222	979
Mace	87	2,472
Nutmegs	650	12,215
Pepper	786	10,681
Pepper shells	131	618
Pimento	76	676
Corkwood	....	71,698
Dyewood	....	544
Fustic	....	4,974
Logwood, M. lbs.	1,001	4,824
Cork	....	4,051
Flour spar	....	182
Plaster	....	1,625
Portland cement	10,866	13,305
Perfumery	38	3,825
Powder, polishing	....	1,603
Seed, annatto	4	40
Seed, anise	25	147
Seed, cardamom	9	316

FOREIGN MAILS

The following table gives the date and time of closing the mails for foreign countries at the New York Postoffice. A star indicates that letters may be addressed per the steamer named for the countries indicated. A dagger indicates that registered mails close at 6 p. m. on the previous day. In case of mails via steamers from Pacific ports the hour of closing daily is up to the date specified.

After the closing of the supplementary Trans-Atlantic Mails named below additional supplementary mails are opened on the piers of the American, English, French and German steamers and remain open until within ten minutes of the hour of sailing of steamer.

Mails for—	Steamer.	Date.	Mails close at P. O. Regular.	Suppl.
Costa Rica, Belize, Puerto Cortez and Guatemala	From N. Orleans.	June 27..	3 p. m..	—
Haiti* and Inagua	aginaw	June 28..	1 p. m..	—
Newfoundland	†rom N. Sydney.	June 28..	8.30 p. m..	—
Jamaica	†rom Phila.	June 28..	10 p. m..	—
Europe (except Spain), via Southampton and Bremen	Frave ...	June 28..	7 a. m..	—
Central America (except Costa Rica) and So. Pacific ports	Allianca	June 28..	12 m. ..	1 p. m.
Jamaica	From Baltimore.	June 29..	11 p. m..	—
Europe (except Spain), via Queenstown	Teutonic	June 29..	9 a. m..	10.30 a. m.
Europe (except Spain), via Southampton and Antwerp	Southwark	June 29..	10 a. m..	—
Europe (except Spain), via Cherbourg, Southampton and Hamburg	Fuerst Bismarck.	June 30..	6 a. m..	—
Bermuda	Orinoco	June 30..	1 p. m..	1.30 p. m.
Europe (except Spain), via Queenstown*	Lucania	July 2..	11 a. m..	12.30 p. m.
France, Switzerland, Italy, Portugal, Turkey, Egypt and Br. India, via Havre*	La Bourgogne	July 2..	7 a. m..	—
Netherlands direct, via Rotterdam	Amsterdam	July 2..	8 a. m..	—
Scotland direct, via Glasgow	Anchoria	July 2..	10 a. m..	—
Netherlands direct, via Amsterdam	Edam	July 2..	8 a. m..	—
Newfoundland	Roumanian, from Phila.	July 2..	2.30 a. m..	—
Fortune Islands, Jamaica, Savanilla and Carthagena*	Alleghany	July 2..	10 a. m..	10.30 a. m.
Newfoundland	From N. Sydney.	July 2..	8.30 p. m..	—
Brazil and La Plata countries	Galileo	July 2..	10.30 a. m..	—
China, Japan and Hawaii, via San Francisco.				
China and Japan, via Vancouver	Coptic	To July 1..	6.30 p. m..	—
China and Japan, via Tacoma	Empress of China	To July 4..	6.30 p. m..	—
Australia (except West Australia), New Zealand, Hawaii, Fiji and Samoan Islands, via San Francisco	Arizona	To July 11..	6.30 p. m..	—
Society Islands, via San Francisco	Alameda	To July 8..	6.30 p. m..	—
	City of Papeiti	To July 25..	6.30 p. m..	—

NAVAL STORES.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*
Complete prices current will be found on page 35

Saturday Evening, June 25, 1898.

SPIRITS TURPENTINE. — Under heavy receipts at the South, the price there has declined another half cent, and while holders are not offering freely at the decline, the position undoubtedly favors buyers. It is predicted that the receipts for June will be the heaviest on record for the month, and as the demand is rather backward, this is having an effect upon all markets. Here the spot stock is not heavy, and the market is steady at the moment, though at a decline of ½c. and without any activity in the demand, which is restricted to jobbing parcels. We quote regulars 26¾c., and machines 27¼c.

ROSINS.—There has been no change in prices and the market is fairly steady, especially in the lower qualities to which the demand is confined. Medium and pale grades are neglected.

Com'n st'd.	@1.42½	I	1.85 @1.90
Good st'd...	@1.45	K	1.90 @1.95
E	1.50 @1.55	M	@2.00
F	1.65 @1.67½	N	2.07½@2.10
G	1.70 @1.72½	W G	2.15 @2.20
H	1.80 @1.82½	W W	2.25 @2.30

TAR AND PITCH.—Trade is light in both articles, but the market is steady and has even hardened a little since our last. We quote tar regulars $1.90@2; oil barrels, $3.50; pitch, $1.75@1.80.

Charleston, S. C., June 24.

Turpentine firm at 23c.; sales none.

Savannah, Ga., June 24.

Spirits turpentine firm at 23½c.; sales, 500; receipts, 2,318. Rosin firm and unchanged; sales none; receipts, 5,453.

Wilmington, N. C., June 24.

Spirits turpentine firm at 23@23½c.; receipts, 196. Rosin firm at $1@1.05; receipts, 538. Crude turpentine quiet at $1, $1.60 and $1.70; receipts, 490. Tar steady at $1.30; receipts, 131.

Liverpool, June 24.

Turpentine—Spirits steady. 24s. Rosin—Common steady, 5s.

Messrs. James Watt & Son furnish the following London turpentine statistics:

	1898.	1897.	1896.	1895.
Stock June 11.	5,926	14,456	11,115	10,678
Del. this w'k.	2,013	1,742	1,886	1,534
Since Jan. 1.	41,405	33,132	43,006	32,113
Price June 11.	22s.6d.	21s.3d.	20s.	22s.4½d.
Sept.-Dec	21s.	21s.	18s.3d.	22s.1½d.

The Assay of Cantharides.

BY H. G. GREENISH AND H. WILSON.

Twenty grms. of cantharides in No. 40 powder are mixed in a small mortar with 25 c.c. of menstruum composed of glacial acetic acid, 1 vol.; rectified spirit, 2 vols.; chloroform, 3 vols. The moistened mass is covered for at least an hour, and then allowed to dry spontaneously, or at a slightly raised temperature. The dried mass is then extracted with boiling chloroform in a Soxhlet tube. After extraction, the chloroform solution is mixed in a separator with a little water, and the acetic aci nearly, but not quite, neutarlised with solution of potash. The mixture is well shaken, the chloroformic layer separated and evaporated. The residue thus obtained is washed with petroleum spirit, which removes the fat, with some cantharidin, and leaves crystals of crude cantharidin, which are dried and cautiously washed with absolute alcohol until white, the alcoholic washings being evaporated and the residue reserved. The cantharidin removed by the fatty solution of petroleum spirit is thus recovered; 20 c.c. of 10 per cent. caustic potash solution are added, and the mixture warmed until the fat is saponified. The soap solution is transferred to a separator, covered with a layer of petroleum spirit, and acidulated with hydrochloric acid. The fatty acids rise to the surface, and are dissolved in the petroleum spirit, leaving the cantharidin in the lower aqueous layer, which is quickly separated and shaken out with chloroform; the residue of the alcoholic washings are added to this chloroform solution, which is then washed with lime water containing an excess of calcium hydroxide suspended in it, and the chloroform caused to separate by the addition of salt solution. The aqueous solution containing the cantharidin as a soluble lime compound, is filtered, acidified with hydrochloric acid, and shaken out with chloroform; on evaporation, crystals of pure cantharidin are obtained, which, added to those at first separated, are weighed after drying in a desiccator.

The free cantharidin is determined by a similar process to that given above for total cantharidin, omitting the preliminary treatment with acetic acid.

The combined cantharidin is deduced from the difference of the total and free active principle. The amounts of total cantharidin found in two samples of beetles by this method, were 0.56 and 0.68 per cent.—Pharm. Journal.

Visiting Southern Military Stations.

The Southern Railway and the F. C. & P. R. R., Florida Short Line, offers the quickest time between New York and Savannah, Fernandina, Jacksonville, Tampa and Key West. Double daily service, with through Pullman Sleeping Cars New York to Tampa, leave New York at 4.20 p. m. and 12.05 a. m. Dining Car on the afternoon train from New York to Charlotte. Connections are made at Tampa and Miami for Key West. For full particulars call on or address ALEX. S. THWEATT, Eastern Passenger Agent, 271 Broadway, New York.

The Vapors from Heated Sulphuric Acid.

BY HERBERT N. MORRIS.

Of late years many processes for the concentration of sulphuric acid up to 94—98 per cent. monohydrate have been introduced, based upon the principle of surface evaporation, as distinct from distillation. By this I mean, that instead of fractionally distilling the acid, as is done, for example, in platinum stills, the acid is heated in open vessels placed directly or indirectly in a fire flue; and the vapors from the vessels are exposed more or less to the flue gases or the atmospheric air.

Amongst such processes I may mention those of Garroway, Negrier, Webb, Veitch, Levinstein, Dyson, etc., some of which have come into very considerable use, especially in this country.

In an experience of several years, working one of these processes (Levinstein's), I have made a number of observations, some of which I think are worthy of bringing to the notice of this society. With the kind permission of Mr. Levinstein, at whose works the experiments have been made, I beg to bring before you the following:

I have noticed, and others have had similar experience, that in concentrating by the evaporation process, and in particular in concentrating to a high percentage of monohydrate, a quantity of white vapors are given off, which do not necessarily contain a large amount of acid, but which are undoubtedly difficult to absorb or condense.

I have seen the vapors from one concentrating apparatus (bringing 30 tons per week of acid, sp. gr. 1.75 up to 95 per cent. monohydrate) cooled to 15° C., through a series of pipes immersed in cold water, then passed through a coke scrubber tower moistened with water; emerging from the tower into the chimnew, white like steam, scarcely any visible change having taken place by the treatment. It is hardly necessary to say that the acidity in the vapor was finally very minute.

In concentrating dilute sulphuric acid up to 96 per cent. monohydrate by heating in a closed retort connected with a condenser, practically no white fumes are evolved. All the fumes are easily condensed by cooling.

If, during the concentration of the acid, dry air be passed very slowly over the surface of the liquid in the retort, little or no effect is seen, but a rapid stream of air causes immediate evolution of dense white fumes, which do not disappear in the condenser, but pass in white volumes into the atmosphere. Moist air has the same effect as dry, viz., very slow current no effect, a rapid current dense, white fumes. Carbon dioxide has the same effect as air.

The following experiment is worth referring to in detail:

Eight hundred and six grms. of acid, sp. gr. 1.62, were placed in a retort connected with a long condenser, attached to a glass receiver, from which a vertical tube was carried to the top of the room. The retort was gradually heated and dry air was passed over the surface of the acid. At as low a temperature as 135 degrees C. slight white fumes came out of the end of the apparatus into the atmosphere, but none were visible in the retort. At 170 degrees white fumes appeared in the retort and passed through into the air. At 200 degrees dense white fumes filled the retort, the condenser, receiver, and outlet tube, and passed into the air. The temperature was maintained at 200 for 3½ hours, dry air being passed over the acid during the whole of the time. The vapor was quite cold in the receiver. The vapor escaping into the air in the earlier part of the experiment scarcely affected moist litmus paper. A piece of neutral paper immersed in the fumes turned red after five minutes. At the end of the experiment the acid in the retort was found to contain 94.9 per cent. monohydrate. The total loss by volatilisation was 8.53 per cent., of which 1.35 per cent. had been condensed in the apparatus, the remainder passing into the air.

It is interesting to note from this experiment that sulphuric acid may be concentrated to 95 per cent. at as low a temperature as 200° C., possibly lower, but owing to the difficulty of condensing or utilizing the fumes evolved, it is at present impracticable.

If fuming sulphuric acid, e. g., acid containing 40 per cent. sulphuric anhydride, be melted in a retort and a current of dry air be passed over the surface, some volatilization takes place, but no white fumes are formed. If, however, the air contain moisture, dense white fumes are formed which behave in every way like the white fumes above referred to, from the concentration of sulphuric acid, and I have taken them to be identical.

I am not aware that anything has been published showing the exact composition or condition of existence of this vapor. No definite compound or mixture seems to have been detected and examined, but it is generally assumed that sulphuric acid is decomposed or dissociated by heat into sulphuric anhydride and water. Supposing our vapor to be a mixture or compound of SO_3 H_2O, a re-combination might be expected to take place on cooling, which appears to be the case when acid is heated in a vessel out of contact with air or other gas.

(To be Continued.)

(Special Correspondence to the Reporter.)

Philadelphia Chemical Market.

Philadelphia, June 24, 1898.

ALKALI—Is meeting with a better demand than usual at this season of the year. Prices remain firm and considerable inquiry is noted for future deliveries. High test is quoted at .55@60c. f. o. b. works. Foreign high test can be had at .75@.80c., both on spot and to arrive, with the usual advance for 48 per cent.

SAL SODA—Is firm for American makes, and .50@.55c. is now named from second hands. Foreign is quoted at .70@.75c. on spot and .65@.70c. for shipments.

CAUSTIC SODA—Is quiet at the moment, spot goods ranging from 1.65 to 1¾c., as to test and quantity. These figures will also buy for shipments.

BLEACHING POWDER—Is quoted at 1.80@1.85c. for prime Liverpool brands on spot, with very little to draw from. To arrive, 1¾@1.80c. is named, and shipments are without change.

NITRATE OF SODA—On spot is obtainable at 2@2.10c. in a jobbing way. To arrive, 1.80@1.85c. is named, and shipments are held at 1⅝@1.67½c., as to date of arrival.

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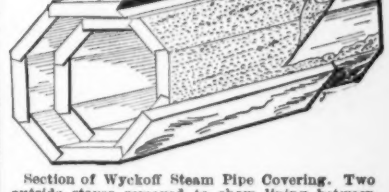
Section of Wyckoff Steam Pipe Covering. Two outside staves removed to show lining between inside and outside staves.

A. WYCKOFF & SONS,
No. 110 East Chemung Place, Elmira, N. Y.

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PETROLEUM MARKET.

Saturday Noon, June 25, 1898.

Reports from the producing fields are not encouraging to the producers, the wells being brought in being for the most part very light and the percentage of dry holes is considerably larger than it has been. The efforts to find extensions to pools and fields has in most cases proven futile, and unless some new pool is soon discovered, or an important and rich extension established, we may expect a steady decrease in the total output of oil, as the new wells being brought in fall far short of making good the decrease in the older wells. There has of late been a steady decrease in the production of Pennsylvania crude and the reports from Ohio and Indiana do not appear so favorable as they did. This condition of affairs in the producing fields has had its effect upon the market, the price of crude at the wells having been marked up three times during the week, while the speculative operators on the exchanges have become encouraged to bid a fair advance on certificates over the prices paid for credit balances. The deliveries of Pennsylvania oil have of late decreased, but they are still in excess of the runs, and the pipe line reports for the current month will probably show a marked change compared with those for the month of May.

Refined and Products.

There has been very little demand for refined in barrels for export, and, as there have been fewer tank vessels on this side, the total engagements have been smaller, aggregating only about 100,000 bbls. The supplies abroad have not accumulated, but as this is the season of year of smaller consumption, the shipments cannot be expected to show important increase before the close of Summer. The price of barreled oil has remained steady at 6.15c. for New York loading, and at 6.10c. for Philadelphia loading. The principal foreign markets are steady. Quotations to-day by cable were: Antwerp, 17⅛f.; Bremen, 6.05m.; London, 5⅛d., and Liverpool, 5⅛@5¼d. Freight rates were steady at 1s. 9d.@ 1s. 10½d. hence to London, and 1s. 9d.@ 3s. 3d. to Continental ports, as to port and vessel. Home trade lots have been in fair request, and are firm on the basis of 6c. for 150 degrees water white from tanks, and 9c. in barrels.

Cases for export have been in active request, and sales of over 400,000 are reported. The price for plain tops has been steady at 6.80c. Freight rates are firm. The nominal rates for large vessels are: For Amoy, 23@24c.; Bombay, 16½@17c.; Calcutta, 16@18c.; Colombo, 22@23c.; Java, 22@23c.; Pedang, 22@23c.; Hong Kong, 22@23c.; Japan, 23@24c.; Saigon, 20@22c.; Shanghai, 24@25c.; Singapore, 18@19c.; Yokohama, 20@24c.

Crude for export has been in good request, and sales of over 60,000 barrels are reported. Washington crude is quoted at 6.15c. in barrels. Cases for export have not been in request, and no sales are reported.

Prime city naphtha rules steady at 5.50c. For export sales of about 10,000 barrels are reported.

Closing Quotations.

CRUDE.

National Transit Certificates	℔ bbls.	88@88½
Washington crude in bbls	℔ gal.	6.15
" " bulk		3.65
Residuum, bbls. for export		4¼@4⅛

CRUDE AT THE WELLS.

The following are the prices paid by the pipe lines for crude as delivered from the wells:

	1898.	1897.
Tiona ℔ bbl.	97	95
Pennsylvania	87	85
Barnesville	77	75
Corning	70	68
New Castle	62	60
North Lima	63	48
South Lima	58	43
Indiana	58	43

REFINED—FOR EXPORT.

Cargo lots for export ℔ gal.	— @ 6.15
In bulk	— @ 3.65
Philadelphia loading	— @ 6.10

REFINED—JOBBING LOTS,

In barrels, pkgs. included.

120 fire test, S. W. per gal.	— @ 7¾
120 fire test, S. W.	— @ 8
150 fire test, W. W.	— @ 9
In bulk from tanks	— @ 6
300 fire test	8 @ 8½

REFINED IN CASES—110 FIRE TEST.

Two five-low screw, cargo lots	6.80
5,000 to 10,000	6.90
1,000 to 5,000	7.00
700 to 1,000	7.10
400 to 700	7.20
300 to 400	7.30
200 to 300	7.40
100 to 200	7.60
Under 100	7.70

NAPHTHA AND GASOLENE.

Naphtha, crude, cargo lots, 68@72 deg.	@5.50
Naphtha, crude, car lots, 68@72 deg.	@5.50
Naphtha, crude, 70 deg.	6 @ 6¼
sweet, 62 or 63 deg.	7 @ 7⅛
70 deg.	7⅛@ 7⅜
73 deg.	7⅜@ 7⅞
"Stove"	9¼@ 9½
Gasolene, 86 deg.	13 @14
88 deg.	15 @16
90 deg.	18 @19

Petroleum Statistics.

RUNS—TOTAL AND AVERAGE.

	Day.	Total.	Av'age
Friday June 17	51,696	1,261,396	74,199
Sat.-Sun. " 18&19	128,987	1,390,373	73 178
Mon. " 20	96,188	1 486,561	74,328
Tues " 21	97,367	1,583,928	75,425
Wed. " 22	85,155	1,669,083	75,767
Thurs. " 23	85,352	1,755,435	76,323

	1896.	1897.	1898.
January	2,676,196	2,670,695	2,745,712
February	2,473,288	2,637,771	2,442,436
March	2,676,264	2,911,172	2,814,029
April	2,879,608	2,789,556	2,652,552
May	2,839,612	2,852,124	2,681,119
June	2,881,414	2,939,863	.....
July	2,900,382	2,992,632	.....
August	2,870,915	3,062,668	.....
September	2,772,212	3,002,002	.....
October	2,858,544	3,023,053	.....
November	2,701,688	2,948,854	.....
December	2,916,448	2,894,296	.....
Year	33,455,571	34,724,700	.....
Average	2,787,964	2,893,725	2,667,169

DELIVERIES—TOTAL AND AVERAGE.

	Day.	Total.	Av'age.
Friday June 17	91,470	1,340,398	78,847
Sat.-Sun " 18&19	85,747	1,426,145	75,070
Mon. " 20	94,955	1,521,110	76,056
Tues. " 21	75,167	1,596,277	76,013
Wed. " 22	114,783	1,711,065	77,776
Thurs. " 23	74,375	1,785,440	77,628

	1896.	1897.	1898
January	2,532,604	2,533,269	2,903,813
February	2,248,403	2,305,390	2,132,151
March	2,436,008	2,773,133	2,625,124
April	2,223,092	2,453,728	2,421,383
May	2,418,434	2,546,696	2,392,830
June	2,248,782	2,555,959	.....
July	2,540,189	2,707,317	.....
August	2,404,005	3,100,208	.....
September	2,539,922	2,951,221	.....
October	2,594,520	3,628,538	.....
November	2,494,523	3,312,597	.....
December	2,603,638	2,758,008	.....
Year	29,284,210	33,621,058	.....
Average	2,440,351	2,801,755	2,495,060

CHARTERS—TOTAL AND AVERAGE.

	Day	Total.	Av'age
Friday June 17	76,191	1,586,867	81,580
Sat.-Sun " 18&19	154,810	1,545,677	8 ,351
Mon. " 20	95,438	1,640,915	82,045
Tues. " 21	98,370	1,679,645	79,933
Wed. " 22	23,810	1,703,455	77,430
Thurs. " 23	15,973	1,719,328	74,758

	1896.	1897.	1898.
January	1,834,675	1,960,649	2,701,308
February	1,759,056	1,692,064	1,882,355
March	2,231,547	1,917,670	2,203,141
April	1,755,524	2,324,256	1,759,600
May	1,929,212	2,101,829	1,971,269
June	2,444,060	2,204,998	.....
July	2,366,000	2,533,853	.....
August	2,440,557	2,176,978	.....
September	2,363,692	2,524,897	.....
October	2,218,573	2,619,428	.....
November	2,164,114	2,360,634	.....
December	2,103,771	1,968,572	.....
Year	25,610,781	26,386,028	.....
Average	2,134,232	2,198,836	2,103,535

CHARTERS FOR THE WEEK

The total charters for refined, crude, naphtha, &c., in bulk, barrels and cases, during the week ending June 24, and from January 1, were as follows:

	Week.	Year.	1897.
Refined, bbls & bulk	112,300	5,052,000	4,969,230
Refined, cases	397,000	9,678,000	8,011,000
Crude, bbls & bulk	61,200	958,300	1,000,200
Crude, cases	.....	67,000	218,000
Naphtha, bbls	2,500	122,600	54,100
Residuum bbls	.....	205,100	54,100
Lubricating, bbls	.....	8,000	9, 00
Barrels, cde eq	371,774	12,227,014	11,8.6,850

CLEARANCES FOR THE WEEK.

During the week ending June 24 and since January 1, the clearances of petroleum, in gallons, from the port of New York were as follows:

	Week.	Year.	1897.
Refined	8,679,059	245,467,911	205,935,467
Crude	.....	1,015,902	2,240 601
Naphtha	366,042	3,510 031	2,751,429
Residuum	30,967	629,394	794,185

EXPORT STATISTICS

The following table shows the total exports from the port of New York and from the United States reduced to crude equivalent in gallons, for the week ending June 24; also total shipments to date, with comparisons with 1897:

From N. Y. for week ending June 24	11,572,132
Total from N. Y. from Jan. 1, 1898	339 637,548
Same period last year	247,451,744
Increase	41,185,803
From U. S. for week ending June 24	22,517,079
Total from U. S. from Jan. 1, 1898	372,869 324
Same period last year	52 ,091,393
Increase	52,499,900

TOTAL EXPORTS FROM DIFFERENT PORTS.

	1898.	1897.
New York	339,637,547	297,451,744
Philadelphia	27,652,077	198,147,847
Baltimore	24,852,101	33,529,681
Boston	699,533	759,372
San Francisco	315,065	202,599
Grand Total	372 359 321	530 091,293

Foreign Quotations.

REFINED.

	Antwerp.	Bremen.	London
Monday	17½@—	6 05	— @5⅛
Tuesday	17½ @—	6 05	— @5⅛
Wednesday	17⅛ @—	6 05	— @5⅛
Thursday	17⅛ @—	6 05	— @5⅛
Friday	17⅛ @—	6 05	— @5⅛
Saturday	17⅛@—	6 05	— @5⅛

PETROLEUM CHARTERS.

New York.

Following is a list of vessels chartered and loading or to load petroleum at New York, Philadelphia, Baltimore and Boston. Quantities are refined in bbls. unless stated otherwise:

Week ending Oct 15

Br shp, Calcutta, 18½c. ..... cs 90,000

Week ending Oct 22

Br shp County of Linlithgow, Calcutta, 19c. ..... cs 85.000

Week ending Oct. 29

Br bk Drummond Castle, Calcutta, 18½c. ..... cs 120,000

Week ending Nov 12

Am shp John Currier, Japan, 21@22c. cs 70,000
Br bk, Zanzibar, p t ..... cs 30,000

Week ending Nov. 19.

Br sh ——, Japan, 21½@22½c. ..... cs 100,000
Br bk Oakbank, Java, 20, 21@22c. ... cs 60,000
Br sh Aladdin, Java, 20, 21@22c. ... cs 60,000

Week ending Dec. 24.

Br sh County of Inverness, Calcutta, 17½c. ..... cs 65,000
Br sh County of Haddington, Calcutta, 17½c. ..... cs 70,000
Br sh, Calcutta, 17½c. ..... cs 95,000

Week ending Jan. 7.

Br shp County of Kinross, Calcutta, 17½c, ... cs 65,000
Br shp Palgrave, Calcutta, 16½c. ... cs 130,000
Br bk Wanderer, Calcutta, 17c. ..... cs 115,000

Week ending Jan. 14.

Br bk Howard D. Troop, Hong Kong, 21¾c. ..... cs 85,000

Week ending Jan. 21.

Br bk H Troop, Hong Kong, 21¾c. ... cs 80,000

Week ending Jan. 28.

Am shp St Mark, Hong Kong, 21½c. .. cs 70,000

Week ending Feb. 18.

Br bk Alcedo, Calcutta, 17c. ..... cs 100,000

Week ending March 4.

Ger shp Theo Fischer, Sweden, 2s. 3d.. 10,000

Week ending March 11.

Br shp Crofton Hall, Shanghai, 25c. ... cs 80,000

Week ending March 18.

Br shp, Japan, 22½@23½c. ..... cs 60,000

Week ending April 1.

Dch bk, Burgemeester Jankheer Caenen, Java, 21, 22 & 23c. ..... cs 60,000

Week ending April 8.

Br bk, Lindley, Java, 20½, 21½@22½c. .. cs 60,000
Br shp Dalcairnie, Japan, 22½@23½c. .. cs 70,000
Br shp Fairport, Japan, 22½@23½c. ... cs 80,000
Br shp, Japan, 22@23c. ..... cs 80,000

Week ending April 15.

It bk, Penang or Singapore, 19c. ..... cs 35,000
Br bk Thistlebank, Java, 20, 21 & 22c. cs 100,000
Br shp Alice A. Leigh, Japan, 22@23c. cs 115,000

Week ending April 22.

Br bk Inverness-shire, Japan, 22½@ 23½c. ..... cs 95,000

Week ending May 6.

Br bk Elginshire, Japan, 22½@23½c. cs 80,000
It bk Savina, Marseilles, pt. 4,000
Br shp Wm Tilly, Japan, 23@24c. ... cs 70,000
Br bk Port Adelaide, Java, 20@21c. .. cs 55,000
Ger bk Atlantic, Dublin, 2s 4½d. ... 8,000
Ger shp Margaretha, Ger Baltic, pt.. 7,800
Ger shp Wilhelm, Stockholm, 2s 6d.. 8,000
Dch shp, Java, 20, 21 & 22c. ..... cs 75,000

Week ending May 13.

Ger bk Bertha, Japan, 23@24c. ..... cs 130,000
Br bk Albyn, Japan, 23@24c. ..... cs 80,000
Br shp W. J. Pirrie, Japan, 23@24c. .. cs 100,000

Week ending May 27.

Am bk Lalla Rookh, Ireland, 3s. 5,000

Week ending June 3.

Br bk Oakbank, Java, p t. ..... cs 75,000
Br shp Pegasus, Hong Kong, 23c. .... cs 95,000
Ger shp Helene, Stockholm, 3s. 8,000
Br shp Elisland, Japan, 23@24c. ..... cs 100,000
Ger bk Cuba, Copenhagen, 3s. 1½d. ... 7,000
Nor bk, Ireland, 3s. 3d. 4,500
Br shp County of Edinborough, Calcutta, 16c. ..... cs 85,000
Br shp Battle Abbey, Liverpool, 2s. 10½d. 8,750

Week ending June 10.

Ger shp Fidelio, London or Dublin, 2s 9d. 8,000
Br shp Aladdin, Java, pt. ..... cs 85,000
Br shp ——, Hong Kong, 22c. ..... cs 85,000
Br bk Sayre, Portishead, 3s. ..... nap 4,500
Ger shp D H Watjen, Japan, 23c. .... cs 85,000
Br shp County of Roxburgh, Calcutta, 15c. ..... cs 75,000
It bk Guiseppe de Abundo, Waterford, 2s 11½d. 5,000
Am shp S D Carlton, Hong Kong, 22c. cs 70,000
Ger bk Standard, Baltic, pt. 9,500

Week ending June 17.

Ger shp Erik Rickmers, Hong Kong, 22c. ..... cs 90,000
Br bk Clwyd, Hong Kong, 23c. ..... cs 45,000
Ger bk Elvira, London, 2s 9d. 9,500
Br shp Queen Margaret, Hong Kong, 23c. ..... cs 85,000
Br bk Andorinha, Shanghai, 25c. .... cs 125,000
Am shp Berlin, Amoy or Foochow, 24 @25c. ..... cs 55,000
Br bk Manchester, Shanghai, 25c. ... cs 120,000
Br bk Trade Winds, Shanghai, 25c. .. cs 120,000

Week ending June 24.

Am shp Abner Coburn, Hong Kong, 22c. cs 70,000
Am shp Paramita, Hong Kong, 22c. ... cs 65,000
Nor bk Bravo, Hull, 3s. 4½d. ..... nap 2,500
Br bk Centurion, Shanghai, 25c. ..... cs 75,000
Br bk Camantha, Shanghai, 25c. .... cs 90,000
Br shp Ladaka, Bombay, 16½c. ..... cs 75,000

Philadelphia.

Week ending Jan. 7.

Br str, Japan, 33@34c. ..... cs 130,000

Week ending Jan. 14.

Br bk Golden Rod, Buenos Ayres, 11½c. ..... cs 20,000
Br shp Rhuddlan Castle, Japan, 23c. .cs 90,000
Br bk, Japan, 23@24c. ..... cs 65,000

Week ending Jan. 21.

Br bk Kinross-shire, Japan, 23c. ..... cs 95,000

Week ending Jan. 28.

Br bk Dundee, Japan, 23c. ..... cs 75,000
Ger shp Peru, Japan, 23c. ..... cs 85,000
Br bk Bowman, B Low, Japan, 23@24c. cs 60,000
Br bk Orion, Japan, 23@24c. ..... cs 75.000

Week ending Feb. 4.

Br bk, Japan, 22@23c. ..... cs 90,000
Br str Nyanza, Japan, 33@34c. ..... cs 100,000
Br shp Glenecleva, Japan, 23@24c. ... cs 100,000

Week ending Feb. 11.

Br bk Elganshire, Japan, 22½c.& 23½c. cs 90,000
Br bk Glenlee, Japan, 23@24c. ..... cs 60,000

Week ending Feb. 18.

Br bk Lady Wentworth, Japan, 23c. .. cs 100,000
Ger bk Chili, Japan, 23c. ..... cs 80,000

Week ending March 4.

Br shp Wm Marshall, Japan, 23@24c. cs 80,000
Br shp Dalgonar, Japan, 23@24c. ..... cs 100,000

Week ending March 11.

Br bk James Kerr, Japan, 23@24c. ..... cs 95,000

Week ending March 18.

Br bk Glencona, Japan, 23&24c. ..... cs 100,000

Week ending April 22.

Br shp West Lothian, Japan, 22½& 23½c. ..... cs 65,000

Week ending May 13.

Br shp Foyledale, Japan, 22½ & 23½c. cs 80,000

Week ending May 20.

Br bk Kentmore, Calcutta, p t. ..... cs 65,000

Week ending June 3.

Br shp W B Pierrie, Java, 23@24c. ... cs 80,000
It bk Progreso, Lisbon, 3s. 3d. 3,000

Week ending June 17.

Br ship Ben Avon, Japan, 23 & 24c. .. cs 65,000
Ger shp Hermann, London or Dublin, 2s. 7½d. ..... nap 11,000

Week ending June 24.

It bk Chiarina, Sicily, 15c. ..... cs 22,000

PETROLEUM CLEARANCE.

Following are the clearances of petroleum from the ports of New York, Philadelphia, Baltimore, Boston and San Francisco on the dates named. Refined, unless otherwise specified:

New York.

June 13.

Br str Amana, Adelaide, 3,000 cs
Br str Amana, Melbourne, 16,500 cs
Br str Amana, Lyttleton, 8,000 cs
Br str Amana, Sydney, 50 cs ben
Br str Amana, Dunedin, 5,000 cs
Br sh Norwood, Lyttleton, 650 cs ben and 1,500 cs ref
Br sh Norwood, Dunedin, 100 cs ben and 1,500 cs ref
Br sh Amazon, Sydney, 11,500 cs ref and 583 cs nap

June 14.

Br str Navahoe, Port au Prince, 1 cs

June 15.

Br str Kaffir Prince, Montevideo, 3,500 cs

June 16.

Br sh Kensington, Hong Kong, 8,109 cs add'l
Br str Antilla, Nassau, 260 cs and 5 bbls

June 17.

Ger str Schleswig, Hayti, 67 cs and 4 bbls
Br sch H B Homan, Parahyba, 5,622 cs
Nor bk Wilhelm Birkedale, Kjoge, 5,113 bbls
Br sh Boadicea, Melbourne, 100 cs ben and 30,800 cs ref
Nor str Albert Dumois, Cape Hayti, 25 cs
Br str J W Taylor, Buenos Ayres, 23,500 cs ref, 631 bbls resid and 110 cs ben
Br str J W Taylor, Montevideo, 10 cs gas and 12,500 cs ref
Br str Alene, Kingston, 1,325 cs
Br str Alene, Port Limon, 120 cs
Br str Alene, Cartagena, 710 cs
Br str Alene, Savanilla, 1,512 cs

June 18.

Br str Gladys Royal, Cape Town, 15 cs ben, 4,850 cs and 30 bbls ref
Br str Gladys Royal, Delagoa Bay, 7,110 cs
Br str Gladys Royal, East London, 3,700 cs
Br str Madiana, Martinique, 1,000 cs
Br str Madiana, Demerara, 1,000 cs
Br str Madiana, St Kitts, 200 cs
Br str Madiana, Domencia, 40 cs
Br str Madiana, Barbadoes, 10 cs
Br str Madiana, St. Croix, 3 bbls and 5 cs
Br sch Preference, Cayenne, 100 bbls and 1,025 cs
Am str Finance, Colon, 397 cs

June 20.

It bk Mascotta, San Domingo, 50 cs
Br sh Frankistan, Yokohama, 79,557 cs
It bk Antonio D'Abundo, Limerick, 4,587 bbls
Nor bk Elise, Sundsvall, 6,077 bbls
Nor bk Grundloven, Liverpool, 4,921 bbls
Br bgt Plover, Bahia, 12,018 cs

June 21.

Dtch str Prins Maurits, Hayti, 1 cs ben and 630 cs ref
Dtch str Prins Maurits, Surinam, 300 cs
Dtch str Prins Maurits, Carupano, 350 cs
Br str Dominic, Para, 12,698 cs
Br str Dominic, Maranham, 550 cs
Br str Dominic, Ceara, 1,410 cs
Br str Roman Prince, Victoria, 3,000 cs ref and 50 cs gas
Br str Roman Prince, Maceio, 12,000 cs
Br str Roman Prince, Santos, 5,000 cs
Ger str Diaman, Hamburg, 1,500,000 gls blk
Br bk Dunstaffnage, Calcutta, 120,000 cs

June 22.

Br bk Beechdale, Hong Kong, 52,704 cs
Ger sh Elise, London, 6,806 bbls nap and 100 bbls ben
Br bk Port Stanley, Shanghai, 91,700 cs
Am bk St Mary, Santos, 25,550 cs
It bk La Fiducia, Londonderry, 3,530 bbls
Ger str Abydos, Coro, 1,630 cs
Ger str Abydos, Curacoa, 652 cs and 1 bbl
Ger str Abydos, La Guayra, 300 cs
Ger str Abydos, P Cabello, 1,815 cs
Ger str Abydos, Maracaibo, 652 cs and 1 bbl

June 23.

Br str Ardandhu, Belize, 892 cs
Br str Ardandhu, Puerto Cortez, 230 cs
Br str Ardandhu, Livingston, 2 dms and 20 cs
Br bgt L G Crosby, Desterro, 8,865 cs
Br bkt L W Norton, Bahia

Philadelphia.

June 11.

Br sh Wm Mitchell, Hiogo, 77,450 cs

June 13.

Br str Aras, Dunkirk, 1,571,897 gls cde blk
Nor bk Ole Knudson, Aalborg, 2,583 bbls

June 14.

Ger str Energie, Flushing, f o, 1,201,947 gls blk
Dan str Christine, Stockholm, 868,569 gls blk

June 15.
Br str Le Coq, Blaye, 1,492,793 gls cde blk
It bk America, Naples, 10,000 cs and 2,301 bbls
It bk Harrington, Lisbon, 2,139 bbls and 8,500 cs

June 16.
Br bk Greenland, Sables D'Olonne, 4,500 bbls cde

June 17.
Dtch sh De Ruyter, Anjier, f o, 68,000 cs

Baltimore.

June 10.
Am sch Annie R Kemp, Old Providence, 62 gls
June 11.
Br str Northern Light, Antwerp, 1,645,507 gls blk

June 15.
Br sch Orient, Harbor Island, 108 gls

Boston.

June 21.
Sch Blomidon, St Vincent, C V I, 2,000 cs
June 22.
Sch Swanhilda, Kingsport, 5 bbls

San Francisco.

Week ending June 18.
Bkt Arago, Santa Rosalia, Mexico, 1,435 cs

Exports of Petroleum.

FROM THE PORT OF NEW YORK.

Refined.

	Week ending June 24, 1898.	Jan. 1 to June 24, 1898.	Jan. 1 to June 25, 1897.
Aalborg	.....	170,403	225,503
Aarhuus	.....	1,296,700	1,259,650
Acajutla	.....	.....	32,000
Adelaide	28,800	755,900	770,170
Aden	.....	110,000	200,000
Alexandria	.....	.....	876,200
Algiers	.....	600,959	247,000
Algoa Bay	.....	250,539	104,650
Amoy	.....	.....	1,657,500
Amsterdam	.....	5,142,500	3,395,000
Anjier, f. o.	.....	4,362,510	9,895,410
Antigua	.....	24,410	32,120
Antofagasta	.....	12,000	17,000
Antonio	.....	.....	40,000
Antwerp	.....	8,505,000	8,775,000
Aracaju, Brazil	.....	.....	106,125
Arica	.....	4,250	.....
Aruba	.....	.....	5,000
Auckland	.....	205,060	166,680
Avonmouth	.....	2,850,000	6,369,400
Azores	.....	130,516	119,395
Bahamas	.....	1,781	4,209
Bahia	227,520	1,395,540	996,130
Bangkok	.....	387,890	.....
Barbadoes	100	310,352	103,350
Barranquilla	.....	70,500	88,450
Beira	.....	6,500	4,000
Belfast	.....	850,000	.....
Belize	8,920	120,620	138,661
Bermuda	.....	130,873	141,073
Bluefields	.....	33,010	.....
Boca del Toro	.....	10,777	1,500
Bombay	.....	2,199,990	1,860,300
Bremen	.....	.....	15,081
Brisbane	.....	731,200	476,671
Buenos Ayres	235,000	4,150,440	2,418,094
Calcutta	1,200,000	5,698,360	5,150,050
Caldera	.....	1,750	.....
Caleta Buena	.....	.....	1,000
Callao	.....	271,940	106,440
Campeche	.....	2,000	2,450
Canary Islands	.....	50,000	950,740
Cape Gracias	.....	1,548	700
Cape Town	48,942	488,602	460,840
Cartagena	7,100	187,906	112,308
Carupano	3,500	40,470	38,460
Ceara	14,100	143,540	269,162
Cebadello	.....	.....	90,000
Celba	.....	1,000	4,000
Charlottetown	.....	11,000	8,500
Chittagong	.....	.....	530,010
Christiansand	.....	.....	860,000
Ciudad Bolivar	.....	48,970	28,550
Colombo	.....	.....	337,080
Colon	3,970	282,730	215,555
Copenhagen	.....	614,500	1,506 327
Corinto	.....	98,000	13,560
Cork	.....	391,500	255,315
Coro	200	14,200	16,350
Corral	.....	20,500	40,000
Cuba	.....	247,548	3,120
Cumana	.....	6,700	4,650
Curacoa	6,572	94,461	94,714
Del.goa Bay	70,700	175,500	352,936
Demerara	10,000	304,800	392,972
Desterro	88,650	254,500	123,850
Domenica	400	11,350	23,000
Dover, f. o.	.....	13,006,000	10,243,432
Dublin	.....	1,584,300	1,175,832
Dunedin	62,400	376,800	258,720
Dutch Guiana	3,000	114,000	51,850
East London	36,600	490,872	307,304
Esjberg	.....	116,900	120,650
Eten	.....	2,000	.....
Exmouth	.....	.....	96,732
Flushing, f. o.	.....	63,732,650	55,445,240
Frederica	.....	358,500	.....
Freemantle	.....	423,800	395,432
French Guiana	15,423	67,757	13,100
Gefle	.....	576,225	388,824
Genoa	.....	.....	318,030
Gibraltar	.....	388,700	341,540
Gothenburg	.....	.....	327,050
Grand Cayman	.....	.....	20,000
Grand Bassan	.....	100,000	.....
Grenada	.....	43,500	39,350
Greytown	.....	67,224	68,970
Guadaloupe	.....	113,250	91,980
Guanta	.....	4,450	10,000
Guayaquil	.....	157,300	138,602
Halphong	.....	.....	370,000
Halifax	.....	19,266	19,050
Hamburg	1,500,000	5,839,500	.....
Harbor Breton	.....	3,124	.....
Hayti	7,434	349,561	399,853
Hernosand	.....	398,500	411,162
Hiogo	.....	943,500	.....
Hodeidah	.....	760,000	.....
Hong Kong	608,130	6,703,000	5,868,110
Honolulu	.....	225,000	230,000
Hull	.....	.....	1,000,000
Ipswich	.....	.....	63,568
Iquique	.....	3,000	26,000
Iquitos	.....	1,320	22,850
Jaddah	.....	.....	800,000
Jamaica	12,730	479,892	508,030
Kjoge	261,000	261,000	.....
Kobe	.....	.....	60
Koenigsberg	.....	130,900	.....
La Guayra	3,000	371,229	282,290
La Libertad	.....	200	40,000
La Plata	.....	15,000	20,000
Leghorn	.....	.....	283,470
Limerick	236,000	236,000	172,000
Lisbon	.....	65,100	7,300
Liverpool	252,300	3,429,200	4,757,908
Livingston	400	9,657	12,974
London	.....	12,566,415	5,964,257
Londonderry	180,000	180,000	.....
Lyttleton	91,200	216,000	240,880
Macassar, f. o.	.....	302,710	472,750
Maceio	120,000	409,000	219,459
Madeira	.....	26,000	17,500
Manaos	.....	189,520	143,708
Maracaibo	16,300	92,465	83,255
Maranham	5,500	227,722	157,023
Martinique	10,000	102,351	115,000
Melbourne	457,800	3,801,185	2,960,992
Mocha	.....	100,000	.....
Mollendo	.....	.....	2,608
Molucco Island	.....	.....	1,009,010
Montevideo	155,400	1,859,330	1,514,300
Montserrat	.....	1,200	2,760
Morocco	.....	.....	49,760
Mossel Bay	.....	64,370	35,160
Napier	.....	.....	51,260
Nassau	2,885	70,518	48,954
Nelson	.....	.....	64,800
Newcastle, Aus.	.....	141,600	24,100
Newcastle, Eng.	.....	5,000	5,000
Old Providence	.....	1,015	10,900
Oporto	.....	314,986	410,850
Oran	.....	52,457	145,200
Pacasmayo	.....	11,500	2,000
Pedang	.....	.....	489,480
Palermo	.....	50,000	.....
Para	120,980	1,071,303	1,041,728
Parahyba	58,220	135,720	59,000
Parangua	.....	.....	98,959
Payta	.....	5,000	7,500
Penang	.....	1,684,970	488,600
Pernambuco	.....	1,884,950	1,523,200
Philippine Isl	.....	520,000	.....
Pimental	.....	2,000	1,067,510
Pisco	.....	8,000	7,510
Port Elizabeth	.....	201,452	569,340
Port Limon	1,200	46,819	40,378
Port Natal	.....	716,370	881,110
Portishead	.....	8,900	.....
Porto Cabello	18,150	198,501	240,420
Porto Rico	.....	131,940	125,060
Pozzuoli	.....	.....	177,687
Progreso	.....	1,830	3,950
Puerto Barrios	.....	12,454	10,700
Puerto Cortez	2,300	20,627	9,833
Punta Arenas	.....	39,120	21,500
Queenstown	.....	334,060	.....
Rangoon	.....	443,960	283,290
Reunion	.....	.....	167,000
Rio G. do Sul	.....	795,563	673,880
Rio Janeiro	.....	1,790,860	3,530,740
Rosario	.....	1,115,979	13,504
Rotterdam	.....	20,888,300	17,077,696
Saigon	.....	1,268,760	1,280,870
Salaverry	.....	20,000	5,000
San Andreas	.....	26,666	.....
San Domingo	500	372,799	277,044
San Fernando	.....	13,800	4,000
San Paulo	.....	.....	154,500
Santa Martha	.....	950	2,150
Santos	305,500	1,716,760	1,764,300
Savanilla	15,120	115,465	176,916
Shanghai	917,000	23,235,290	24,243,830
Sierre Leone	.....	10,000	.....
Singapore	.....	.....	100
Sligo	.....	.....	64,575
Sodertelje	.....	.....	188,214
St. Bartholm's	.....	.....	1,000
St. Croix	203	27,615	22,688
St. John, N. B.	.....	1,000	.....
St. John's N. F.	.....	224,530	.....
St. Kitts	2,000	42,310	145,710
St. Lucia	.....	32,594	43,266
St. Martins	.....	3,400	7,352
St. Pierre, Miq.	.....	1,338	2,595
St. Thomas	.....	16,050	18,892
St. Vincent, C.V.	.....	30,000	59,500
Stockholm	.....	817,200	427,807
Sundsvall	310,000	310,000	394,587
Svendborg	.....	172,695	.....
Sydney	110,400	2,375,950	2,025,980
Talcahuano	.....	2,030,800	1,928,900
Tampico	.....	100,152	120,941
Townsville	.....	96,000	96,000
Tralee	.....	.....	147,699
Trinidad	.....	312,226	237,186
Truxillo	.....	5,570	8,900
Turks Island	.....	4,627	4,503
Valparaiso	.....	824,500	224,500
Vera Cruz	.....	4,000	1,750
Victoria	30,000	30,000	140,000
Wellington	.....	414,096	265,200
Yokohama	795,570	7,893,700	6,382,870
Zanzibar	.....	530,000	280,250
Totals	8,679,099	246,466,907	221,851,830

Crude.

Algoa Bay	.....	9	.....
Brisbane	.....	13,178	.....
Canary Islands	.....	.....	2,629
Demerara	.....	526	.....
Frontera	.....	100	.....
Havana	.....	773,039	1,032,391
Melbourne	.....	10,000	.....
Port Limon	.....	.....	51
Porto Rico	.....	218,150	.....
Rio Janeiro	.....	.....	1,046,410
St. John, N. B.	.....	.....	109,120
Vera Cruz	.....	.....	100,000
Totals	.....	1,015,002	2,290,601

Naphtha.

Adelaide	.....	2,290	2,380
Aden	.....	.....	100
Algoa Bay	.....	450	.....
Bahia	.....	1,475	285
Barbadoes	.....	.....	117
Belize	.....	152	104
Bermuda	.....	4,245	1,808
Bremen	.....	349,250	.....
Brisbane	.....	4,240	.....
Buenos Ayres	1,050	33,819	28,632
Cape Town	145	3,720	1,157
Cartagena	.....	.....	510
Ciudad Bolivar	.....	.....	500
Copenhagen	.....	25,400	.....
Coriato	.....	.....	20
Cork	.....	.....	219,327
Cuba	.....	3	.....
Curacoa	.....	895	732
Delagoa Bay	.....	200	.....
Demerara	.....	.....	20
Dublin	.....	25,000	.....
Dunedin	960	4,800	4,478

PRATT'S PATENT
PREPARED GASOLENE

Adapted to all kinds of Gas Machines 86 , 88° and 90° Gravities.

Pratt's Deodorized Stove Gasolene — For use in Vapor Stoves. Made in accordance with the recommendations of the Vapor Stove Manufacturers and guaranteed not to smoke, smell or gum the burner.

Redistilled Naphthas — Also Fuel Oil, Lima Crude, Distillates, &c.; prepared especially for Gas Companies and obtainable either in barrel or tank car.

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The above goods can be had in quantities to suit the purchaser everywhere in the East, either through our agents, or from us direct.

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Proprietors "Pratt's Astral Oil" 26 BROADWAY, NEW YORK

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ESTABLISHED 1887.

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East London	.....	400	850
Exmouth	.....	.....	75,426
Fredericia	.....	.....	.....
Freemantle	.....	822	.....
French Guiana	.....	57	.....
Gefle	.....	20,500	15,000
Gothenburg	.....	.....	24,950
Greytown	.....	.....	40
Halifax	.....	5	.....
Hayti	10	4,302	19,416
Honolulu	.....	.....	460
Jamaica	.....	254	175
Kobe	.....	.....	50
La Guayra	.....	70	.....
Lisbon	.....	300	950
Liverpool	.....	920,323	808,440
London	350,000	2,168,600	1,226,689
Lyttleton	6,240	7,873	960
Manaos	.....	5,838	720
Maracaibo	.....	.....	38
Maranham	.....	10	.....
Melbourne	960	34,156	17,982
Montevideo	100	2,120	500
Nassau	.....	.....	50
Para	.....	7,809	623
Portishead	.....	222,100	251,950
Port Limon	.....	100	120
Port Natal	.....	740	730
Porto Rico	.....	237	249
Puerto Cortez	.....	125	.....
Queenstown	.....	51,120	.....
Rio Janeiro	.....	2,950	3,620
San Domingo	.....	.....	1,972
Santos	.....	2,200	2,000
Savanilla	.....	458	51
Shanghai	.....	.....	50
St. Croix	.....	90	89
St. John, N. B.	.....	250	.....
St. John's, N.F.	.....	100	473
St. Kitts	.....	.....	10
St. Thomas	.....	5	10
Stockholm	.....	15,200	.....
Sydney	6,077	67,131	35,435
Trinidad	.....	110	130
Valparaiso	.....	.....	1,300
Vera Cruz	.....	.....	10
Victoria	500	500	.....
Wellington	.....	2,050	1,295
Totals	366,042	3,913,719	2,754,238

Produce Exchange Committees.

The Board of Managers of the New York Produce Exchange has confirmed the trade and other committees named by President Brainard. The committees on provisions, lard and oils are as follows:

Provisions—C. H. Wessels, chairman; F. A. E. Cott, Samuel L. Finlay, B. B. Roundey, F. H. Stevens.

Lard—John Gledhill, chairman; S. B. Low, H. F. Kanenbley, Lindon Arnold, David C. Link.

Oils—P. M. Millspaugh, chairman; George H. Williams, Herman Loeb, Oscar Flash, Charles I. Long.

TRADE ITEMS.

The Michigan State Oil Inspector has made a record for May. The number of gallons inspected during the month was 1,256,325, as against 1,116,502 for the same month last year. This shows a gain of 139,823 in the number of gallons inspected. It was inspected at $190.55 less expense than during the corresponding month last year.

The committee appointed by the House of British Commons to consider and fix the flash point of lamp oil has decided by a majority of two to raise the standard to 100 degrees.

A charter has been granted to the Southern Oil and Manufacturing Company of Fentress county, Tenn., organized for the purpose of sinking oil and gas wells. The capital stock is named at $50,000 and the incorporators are S. H. Pile, James Cusack, L. T. Smith, C. A. Sussner and George R. Wright.

Petroleum has been discovered in rich quantities in Rincon Canyon, near the boundary line of Santa Barbara and Ventura counties, Cal. The enterprise is controlled by San Francisco capitalists, who have already invested largely in road building and other preliminary improvements. They propose to erect a refinery at Carpenteria should the undertaking prove successful.

INDUSTRIAL SECURITIES.

There are comparatively few complaints as to the state of trade, although the reports agree that there has been a curtailment in business such as is usual at this season of the year. The conditions affecting trade are not unusual, and consequently there is less complaint of dull trade than there would be had the shrinkage developed earlier. The activity in some lines caused by the requirements of the Government in the prosecution of the war relieves what would otherwise be regarded as dull trade. In the lines of trade represented by the Reporter, trading has been very light, the demand for dyes, drugs, chemicals and oils being of midsummer proportions, while the movement of paints has been rather better than is usual at this season of the year, probably due to retardation of the consumption of this class of goods by previous unfavorable weather conditions. From the industrial centers the reports vary greatly, the textile industry continuing dull, as are also some others, while the mining and all those supplying war material are stimulated to an unwonted degree. The labor situation presents few new features of especial interest, the only new strike of consequence reported during the week being that of the woodworkers in Chicago, and it is feared this will spread to formidable proportions. There are, however, other sections in which growing discontent is noticed, and several strikes are threatened, but it is hoped the differences may yet be adjusted to the satisfaction of both employers and employes. The principal agricultural staples have varied between rather narrow limits, and there has been no decided tendency of prices, either up or down. Wheat opened on Monday at 77c. for July delivery, but was brought down to 75½c. during the day, only to recover, and on Tuesday there was an advance to 80c., but this was the extreme for the week, although the variations were frequent. The close on Friday was at 79c. Corn opened at 36⅛c., reached 36¾c. and after receding to 36c. varied between these figures during the remainder of the week, closing on Friday at 36¼c. Oats have ruled remarkably steady at 29c. Cotton has varied between 6.09@6.32c., closing on Friday at 6.16c. Lard has been weak and the variations have been of considerable extent, with 5¾c. about the average price for July delivery at Chicago. The market for time money has been stronger, with the demand good and the supply somewhat larger. Rates at the close were 2½@3 per cent. for 30 to 60 days, 3 per cent. for ninety days to four months, and 3½ per cent. for longer periods. Money on call at the Stock Exchange has again ranged from 1¼ to 1½ per cent. The closing rate on Friday was 1½ per cent. Mercantile paper has been in fair demand, and the supply has continued large, but rates have not changed. Rates at the close were 3@3½ per cent. for 60 to 90 days indorsements, 3½@4 per cent. for choice single names having four to six months to run, and 4½@5½ per cent. for other grades. The price of silver has advanced steadily throughout the week, and closed higher on Friday at 59¼@60¼c. per ounce for commercial bars and 59½@60½c. for Government assay bars. Mexican dollars closed at 45¾c. bid and 46½c. asked. The market for sterling exchange was dull and lower early in the week, but later there was a better inquiry and a firmer tone. Rates for actual business at the close were 4.84@4.84¼ for 60 days, 4.85½ for demand and 4.85¾ for cables. The supply of grain and cotton bills was again irregular, with rates easier at the close. Rates at the close were 4.82½@4.83¼. The Industrials, as a class, have developed no decided tendency either to a higher or lower level, but they show variations of interest, Sugar having declined and Rubber has been higher, while Lead has been entirely neglected. The general list of securities dealt in on the Stock Exchange has been quiet and variable until Thursday, when the market gained considerable strength under improved trading. There was no feature to specially affect values or trading, and the reports from the seat of war had little effect, the variations being due almost exclusively to speculative influences.

Sugar stock has been depressed by speculative traders who apparently understood that they would receive no serious opposition from insiders. The traders finally hammered the stock below 130 on Wednesday, but under this figure there were shorts ready to take their profits, and the stock readily reacted to 130 or over after each depression. The close on Friday was at 130¼. The only report of consequence on the Street was one to the effect that the Arbuckles were pushing work and would extend their operations far beyond the extent originally contemplated.

Cotton Oil stock has developed considerable strength, notwithstanding the continued depression in the lard market and the rather light business in cotton seed oil. The stock, however, was sensitive to trading influences and the variations were due thereto. The last sale on Friday was at 21½.

The fluctuations during the week have been from 128⅝@133, the lowest Wednesday, and the highest Tuesday, closing to-day at 130 bid.

Lead stock was entirely neglected, but the firmness shown by holders was regarded as significant and caused an advance in the bids, but without result. There were no offers under 35, while the bids were at 33¾@34.

The fluctuations during the week have been from 20@21½, the lowest Monday and the highest Friday, closing to-day at 21½ bid.

Whisky stock was depressed on Monday, but later developed considerable strength and at anything under 14 there were always eager buyers, which caused prompt reactions after every depression. On Friday the stock did not go below 14⅛ and closed at 14¼.

The fluctuations during the week have been from —@—, the lowest —— and the highest ——, closing to-day at 34 bid.

Linseed Oil stock was neglected early in the week, but later bids of 18 were accepted and on Thursday at 17, while on Friday the price broke to 15⅝, due, in the first instance, to rather free offerings. There was no news about the concern and the only reports were as to the state of the market for its products.

The fluctuations during the week have been from 12½@15 the lowest Monday and the highest to-day, closing to-day at 14¾ bid.

Rubber stock was quite actively traded in and it was affected mainly by trading influences. It received prompt support from insiders when depressed below 23, the lowest sale being at 22¾, while the highest was at 24⅝. The last sale on Friday was at 23⅝.

Tobacco stock sold on Monday at 114⅜, but advanced during the remainder of the week with moderate variations, reaching 117¾ on Friday, but closed at 117⅜.

Leather stock has ruled quite steady, selling on Monday at 7⅜, on Wednesday at 7¼ and during the past two days at 7⅛.

The regular quarterly dividend of 2 per cent. on the preferred stock of the Procter & Gamble Company has been declared, payable July 15. Books close July 1 and reopen July 16.

In the following table are given the closing quotations Friday night. The market review is complete to Saturday's close:

Name.	*Amount.*	*Bid*	*Asked.*	*Last Sale of Bonds.*
Am. Cotton Oil Co	$30,237,100	21¾	21¾	.....
pref	10,198,600	73¼	75	.....
bonds 8 ℘ ct. g. 1900	3,068,000	—	—	106¼ June 24, '98
Am. Soda Fountain Co	1,250,000	4	8	.....
pref	1,250,000	45	55	.....
2d pref	1,250,000	15	25	.....
Am. Spirits Mfg. Co	28,000,000	14⅛	14⅜	.....
pref 5 ℘ ct. limit	7,000,000	37	37⅜	.....
bonds 6 ℘ ct. g 1915	2,000,000	—	—	85 June 24, '98
Am. Straw Board Co	6,000,000	26¾	27	.....
Am Sugar Refining Co	36,968,000	130	130¼	.....
pref 7 ℘ ct	36,668,000	111	112	.....
Am. Tobacco Co	17,900,000	117¾	117⅞	.....
pref 8 ℘ ct	11,935,000	119	120	.....
div scrip 1896	3,762,000	—	—	92¾ June 23, '9
Celluloid Co	3,000,000	65	70	.....
Con. Stock & Pet. Ex. Membership	.....	—	—	$250—
Diamond Match Co	11,000,000	134¾	135¼	.....
Glucose Sugar Refining Co	26,000,000	45	46	.....
pref 7 ℘ ct	14,000,000	100	100¼	.....
National Lead Co	14,295,400	34	35	.....
pref 7 ℘ ct	14,904,000	106½	107⅛	.....
National Linseed Oil Co	18,000,000	15¾	16	.....
6 ℘ ct. gold deb	1,400,000	—	—	.....
National Starch Co	4,450,700	5¾	7	.....
1st pref 8 ℘ ct	2,219,400	65	80	.....
2d pref 12 ℘ ct	1,846,800	18	30	.....
1st mort 6 ℘ ct. 1920	3,837,000	—	—	105 June 8, '98
National Wall Paper Co	30,000,000	—	52¾	.....
bonds 8 ℘ ct	3,000,000	—	—	.....
P. Lorillard Co	3,000,000	—	—	.....
pref	3,000,000	110	113	.....
Proctor & Gamble Co	1,250,000	220	—	.....
pref	2,250,000	160	165	.....
1st mort. bonds	.....	112	115	.....
Produce Exchange Membership	.....	—	—	$133—Apr. 19, '97
Quicksilver Mining Co	5,708,700	2	2¼	.....
pref 7 ℘ ct	4,891,300	6	8	.....
Southern Cotton Oil Co	2,000,000	40	—	.....
Standard Oil Co	100,233,700	441	443	.....
U. S. Leather Co	52,711,100	7⅜	7¾	.....
pref 8 ℘ ct	62,111,300	65¼	65⅝	.....
bonds 6 ℘ ct. g	5,280,000	—	—	114¼ June 23, '98
U. S. Playing Card Co	3,500,000	.....	90	.....
U. S. Printing Co	3,500,000	.....	90	.....
U. S. Rubber Co	20,166,000	23¾	24¼	.....
pref	19,409,500	85	85½	.....

Reappraisements of Importations.

The Board of United States General Appraisers has reported to the Secretary of the Treasury the following reappraisements of importations which had been appealed by the importers:

18,158—Essential oil, from E. Deas Conti, Vera Cruz, May 12, 1898. Linaloe essence, entered at $600 for 616 pounds. No advance.

(Special Correspondence to the Reporter.)

Drawback on Cyanide of Potassium.

Washington, June 24, 1898.

The Treasury Department has issued the following regulations for the allowance of drawback of duty on cyanide of potassium manufactured from imported yellow prussiate of potash.

"On the exportation of cyanide of potassium, manufactured by the Roessler & Hasslacher Company of New York city, in the manufacture of which no other than imported yellow prussiate of potash is used, a drawback will be allowed equal in amount to the duty paid on the imported material so used, less the legal deduction of 1 per cent. The entry under which the merchandise is to be inspected and laden must show the marks and numbers of the shipping packages, with the contents thereof, and the gross, tare, and net weight of each package separately. The drawback entry must show the net weight of the exported merchandise, and the manufacturer's declaration thereon must state, in addition to the usual averments, that the said merchandise was manufactured after the formula set forth in their sworn statement, filed with the Collector of Customs at New York. Samples may be taken, or sworn samples accepted, as ordered by the Collector, to be submitted to the Appraiser for such expert examination as may be required; and in the liquidation of the entries the quantity of yellow prussiate of potash which may be taken as the basis of allowance of drawback shall not exceed 120 pounds for every 100 pounds of the cyanide of potassium exported, after official verification of weight by a United States Weigher."

LINSEED OIL.—XVI

Considered from a New Standpoint in Its Relations to the Manufacture of Varnishes, Paints, Dry Colors, Printing Inks and Linoleum.

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THE STRONG AND THE WEAK POINTS OF LINSEED OIL FILMS.

When a coating of linseed oil undergoes the chemical change resulting from oxidation, and passes from the liquid to the solid state, producing on the surface to which it is applied a solid and strongly adhesive film, the film thus produced constitutes a protective membrane of great durability, remarkable elasticity and other valuable properties. But, as in the case of many other vegetable tissues or animal membranes, it is porous and thus becomes permeable, although to a small degree, to the action of dampness, to gases, and therefore it cannot absolutely protect against atmospheric influences and other elements the surface upon which it is applied. How to make up for these deficiencies is a science, the science of making varnishes, paints and adequate pigments.

Whatever may be the chemical composition of a linseed oil film which has been termed by some "oxynoleic acid," and by others "linoxyn," the film is not water repellent, at least to the same extent as, for instance, paraffine wax. Neither is it acid proof to the same extent. It is insoluble in water and alcohol; in oil, turpentine and benzine; alkali affects it, air penetrates it, and its solubility in caustic soda is such that this weak point has been turned to advantage. In large paint factories where there is a large accumulation of what are termed "paint skins" (another clear but unscientific name for linoxyn) these "paint skins" are recovered in the form of a menstrum by boiling in a strong alkali solution, and the resulting saponified product used as a vehicle for the production of cheaper paints or emulsified paints.

For the above reasons, and while linseed oil is the best paint oil known, a pure linseed oil film is not the best protective membrane or coating for wood and metallic surfaces. The neutral qualities of this film can be improved, and according to the surface upon which such coating is to be applied, the texture of the film is to be modified; in some instances it is rendered more alkali proof, in other instances more opaque or air proof, and in some cases less glossy or less porous by the addition to linseed oil of gummy, waxy, soluble or insoluble inert substances which add to the pure oil some desirable characteristic or remove from it some objectionable feature, as the case may be.

Hence the comparatively limited uses for "pure linseed oil films" and the endless applications for "compound linseed oil films" of which varnishes, paints, linoleum, special coatings and chemical compositions are only some illustrations.

It is not only as a film producing material that linseed oil finds applications in the arts and manufacture; its uses extend also to the preparation of cements, fillers, putty and pastes. In this case the adhesive property of linseed oil, its penetrative power, miscibility with inert substances such as, for instance, whiting or intensely oxidizing pigments, such as red lead, are to be first considered.

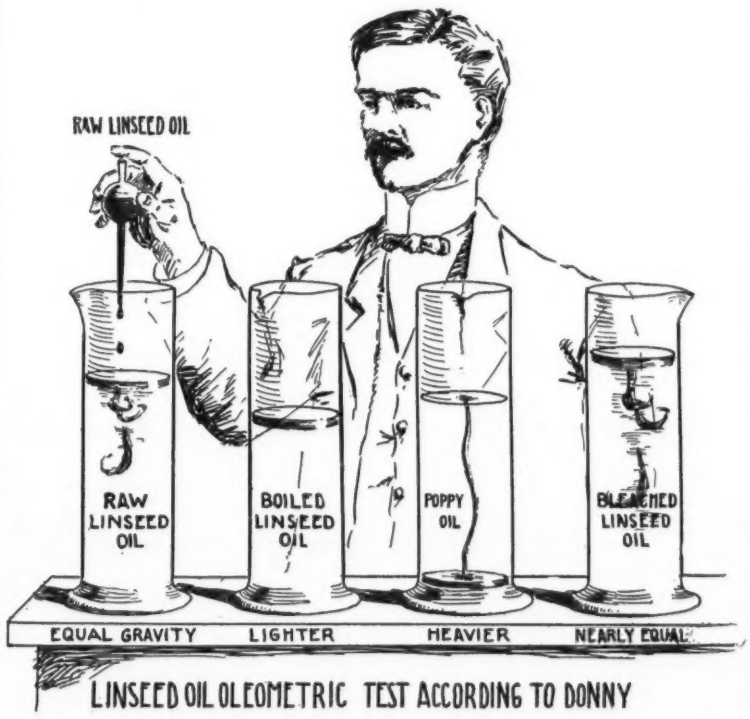
Confining the question at present to the characteristics of the "solid linseed oil film" when linseed oil is to be used, either alone or in connection with some other ingredients capable of adding desirable properties to the resulting film, and without going into details foreign to the main subject, we may say here that all the problems which confront the paint manufacturer, the varnish maker, the producer of linoleum, printing ink, water-proofing compounds or special compositions, who use linseed oil, cannot be better presented and condensed than by the following classification:

First—How to increase the resilience of the resulting film.
Second—How to increase the adhesiveness.
Third—How to increase the water-proofing property.
Fourth—How to increase the transparency.
Fifth—How to increase the hardness.
Sixth—How to increase the rubbing property.
Seventh—How to increase the thickness.
Eighth—How to increase the fire-proofing property.
Ninth—How to increase the opacity.
Tenth—How to increase the penetrative power.
Eleventh—How to increase the acid-proofing property,
Twelfth—How to increase the insulating property.
Thirteenth—How to increase the durability.
Fourteenth—How to increase the enameling property.
Fifteenth—How to increase the elasticty.
Sixteenth—How to increase the brilliancy.

Or as the case may be—

First—How to reduce the transparency of the resulting film.
Second—How to reduce the porosity.
Third—How to reduce the penetrative power.
Fourth—How to reduce the thickness.
Fifth—How to reduce the gloss.
Sixth—How to reduce the cost of the resulting film.

It is to the end of producing some one or more of these results, according to the object at which he aims, that the operator devotes his skill and best endeavor. Hence he gives himself to a series of manipulations that involve the use of numerous ingredients, such as oxidizing agents, waxes, pigments, vehicles, solvents, diluents, menstrums, reducers or inert materials, according to the ultimate end in view. In this endeavor to obtain the best results at the minimum cost price, he may at times hesitate as to what proportions of gums, waxes, pigments, diluents or inert materials he should use. Again, he may not be quite sure as to what ingredients will best serve his purpose. But it is certain that all his endeavors are given to achieve a well defined result, and this may be either to produce a material capable of changing the original aspect of a surface into a more attractive one or to protect more effectually this surface against the destructive action of such or such an element thaan could be done by a coating of linseed oil alone.



LINSEED OIL OLEOMETRIC TEST ACCORDING TO DONNY

In all these manipulations, however, and according to the purpose in view, the original condition of the binding vehicle or linseed oil is to be modified, as per the classification given in the above paragraph.

In the case of reducing the intrinsic merit or value of a coating, in order to meet competition with standard goods or specialties at a reduced price, the problem is no longer one that means how to improve upon the best, but sometimes how to cheapen the cheapest. This latter proposition often presents more arduous problems to solve than the first one, when quality is not to be sarificed.

It is very easy to say or to claim that a faultless paint must be made out of linseed oil, lead or zinc, tinted with just such amount of coloring matter necessary to impart a given tint, tone or shade, and the exact proportion of turpentine diluent and drier to insure the flowing and drying property. Every man in the business knows it from early experience. It is another thing, however, to find a market for the goods thus made when the multitudinous requirements of the trade on one hand and the keen competition on the other are considered, not to speak of the years and years of experience required before one knows where to purchase the right kind of ingredients or materials.

The very same remarks apply as strongly to fat varnishes. The manufacturer's ideal would be, no doubt, to make the goods exclusively from pure linseed oil, pure metallic linoleates, pure turpentine, colorless copal gums, in all cases, but even by so doing (regardless of prices), could he fill the requirements of a critical trade when these requirements are, as is often the case, either conflicting or contradictory?

The ability of a modern varnish maker, paint grinder, linoleum manufacturer, the skill of the operator, the experience of the man who compounds ingredients, are no doubt prime factors of success. But a thorough understanding of the requirements of the trade has fully as much (if not more) to do with success than the relative purity or intrinsic value of the component parts of a paint, varnish or special composition, considered separately.

PURE LINSEED OIL FILMS AND COMPOUND FILMS.

The chemical or mechanical treatment that linseed oil has received during the process of extracting, filtering, refining, bleaching, thickening or boiling, will produce different effects which will manifest themselves not only in the texture, but in the peculiar characteristics and working properties of the resulting linseed oil film when "dry."

This "solid linseed oil film" will be more or less adhesive, transparent, durable, elastic, hard or impermeable, according to the beneficial or hurtful conditions, the favorable or unfavorable elements that have influenced, accelerated or retarded its formation.

In the methods and processes already described we have been considering the natural condition of pure linseed oil as a film producing material, the modifications that takes place in its degree of viscosity, oxidizing power, color and drying property, and the effect of chemical and mechanical agencies upon the resulting "dry film."

From the many sided problems already considered and of which only a few have been practically solved, one may easily form an idea of the magnitude of the linseed oil question, even when this question is limited to the pure oil only in its three commercial forms, i. e., the raw, the boiled and the bleached oil.

But if a pure "linseed oil film" offers by itself a world of study, what can be said of a "compound linseed oil film"—that is, a linseed oil film whose original structure or characteristic is purposely modified by adding to the oil, while in liquid form, insoluble materials, such as pigments, soluble substances such as fossil rosins, varnish gums, vegetable or mineral waxes, chemical solutions, solvents, diluents or other ingredients calculated to produce either a varnish, a paint or a compound best suited for such or such special requirement, and in which case pure linseed oil alone would not give as a coating the desired result.

It would require a volume to enumerate all the standard goods and ever increasing number of specialties pertaining to paints, varnishes, water-proofing compounds, chemical compositions, printing inks, linoleum or other coatings in which linseed oil enters as the most important component part, or, in other words, as the gummy binding constituent which produces the solid film.

When linseed oil is considered as a raw material, entering into the manufacture of varnishes, paints or other coatings, the price of the oil is regulated only by market fluctuations, caused by the law of demand and supply, and not by its degree of purity; it goes without saying that the linseed oil purchased directly from the producer, or from the market for the purposes above specified, is supposed to contain nothing but the liquid product extracted from the flaxseed. Any addition to it, accidentally or intentionally, in the form of another oil or soluble substance constitutes adulteration; the dry film resulting from this impure linseed oil would, in this case, be a "compound film" and not a "pure linseed oil film," having well known chemical and physical properties.

As to the market value of a varnish, a paint or any other coating in which linseed oil enters as a component part, it would be a great error to base it in most cases on the intrinsic value of the materials or ingredients used. The real merit of the finished product can be determined solely and exclusively by the behavior of the resulting "compound film" when this film is submitted to the severe test of constant use, atmospheric exposure or like contact with whatever destructive action it may have to resist according to the purpose in view.

It is because of this that the manufacturer, having secured from the market such a linseed oil (whether raw, boiled, refined or bleached) as he needs, submits this oil to a subsequent treatment, which is sometimes purely mechanical, as, for instance, in paint grinding, and at other times chemical, as in making water-proofing or insulating compounds, varnishes or special compositions. But however simple or complex the operations may be, the ultimate object in view is the production of a "compound film," and from the behavior of that film when submitted to the destructive action of such elements as it will have to withstand depends the merit and usefulness of the product, and therefore its commercial value, which in this instance is not dependent on market fluctuations, but regulated mostly by the extent of the demand created for a special article, which fulfills better than any other some well defined requirements.

WHAT IS THE OBJECT OF LINSEED OIL COMPOUND FILMS?

As already said, the practical manufacture of varnishes, paints waterproofing compounds or special coatings into which linseed oil enters as the main vehicle or liquid ingredient, is based on a thorough knowledge on the part of the operator of the best ingredients and most favorable conditions under which can be produced a compound film; or, in other words, a film that will possess either more elasticity, hardness, adhesiveness, transparency, or, as the case may be, less fibrosity, porosity or adhesive power, than that of a pure linseed oil film.

If we add to linseed oil when it is in liquid form another oil, vehicle or diluent, a resinous, gummy or waxy ingredient, a chemical or an inert substance, it will be found that the texture of the resulting film has been modified in its transparency, porosity, fibrosity, drying and adhesive power. This compound film is not only different in texture, but also in physical and chemical properties, from that produced by pure linseed oil in drying. This addition has been beneficial or detrimental to certain features of the pure oil. It may have reduced the drying, impaired the elasticity, affected the durability of the film, or it may have improved some other characteristics, such as the resilience, the water-proofing property, the gloss, the opacity, the resistance to the destructive action of acids, or the insulating property, and thus rendered it more suitable as a coating for certain purposes.

It is not our intention in this series of articles to advocate or condemn the uses of such and such an ingredient in the manufacture of protective coatings, nor to reopen a discussion on the subject of purity in paints. A paint cannot be properly defined any more than a varnish, unless its working qualities are considered. Both paints and varnishes are compounds, and any attempt to determine the purity of a compound is, in our opinion, another question without issue.

This question, however, can be brought to its proper limits. It can be focussed by a consideration, not of the liquid paint or varnish compound itself, nor of its ingredients taken separately, but by a careful examination of the film produced, the behavior of a compound film being the

only criterion to go by in the determination of the merit, value or usefulness of a paint or varnish.

The most valuable feature of a linseed oil film, namely, its adhesive power, is not always the most desirable. It is, no doubt, the most valuable and desirable in, for instance, exterior paints, but no longer so in many other coatings, as, for instance, a rubbing, polishing varnish made from copal and linseed oil. Such examples could be muitiplied, and the same remarks extended to an endless variety of coatings intended to answer special requirements, all different, almost, in each case.

That raw materials, such as the vehicles, the pigments and the gums, entering into the composition of a paint, varnish or other coating, should be pure, need hardly be mentioned here. But even with ingredients or materials of unquestionable purity, the most favorable conditions brought about in order to insure the working qualities of the resulting film in a paint or varnish are not the direct result of such and such an ingredient separately, but rather the resultant of certain forces, certain combinations of materials, and of their chemical and physical properties.

The addition of pigments renders the film opaque, while the addition of varnish gums increases its transparency. The addition of waxes decreases the fibrosity and the addition of a more fibrous substance decreases the porosity. The addition of a diluent or thinner increases the porosity and thereby decreases the protective effectiveness of the resulting film.

From this statement of simple facts, it is therefore clear that, taking linseed oil as the main vehicle in the production of a protective coating or film, any addition of a solid, semi-fluid or liquid substance to the oil will have upon the resulting dry film either an injurious or a beneficial effect, and the desirable property of the film must be either improved or else affected to a greater or less extent in a way to injure or decrease its protective effectiveness.

Without adding any substance, either liquid or solid, to linseed oil in a liquid state, it is possible to improve its protective quality by treatment of such a nature that its fibrosity will at once be increased, and therefore its porosity decreased.

For example, this is what happens exactly when the natural viscosity of linseed oil is enhanced by blowing air through its mass and thereby rendering it "heavier in body," through partial oxidation. The film produced in this case is thicker, the fibrosity is greater and the porosity reduced.

On the other hand, "heavy body" linseed oil can be restored to its original degree of viscosity by the addition of a diluent such as turpentine or benzine, but the durability of the film will gain absolutely nothing by such addition. On the contrary, the thickness of the film will be reduced in this case.

Now, if we render linseed oil heavier in body through partial oxidation, and without the addition of any metallic oxide, oleate, resinate or pigment, the primal characteristics of the linseed oil dry film will be preserved, its thickness increased, porosity reduced, fibrosity developed and its glossy appearance will be the same.

In the manufacture of printing ink, heavy body linseed oil is highly desirable, because of its property of not adhering so firmly to the lake, color or pigment that has been ground in it. The result is that the printer can obtain from the electrotype a sharper image or clearer print. Lakes or colors that have been ground in linseed oil of normal viscosity cannot give a clear print, the finer lines being filled or clogged up, and the oil penetrates through the paper.

In the case of linoleum, in which the pliability and elasticity of the film are the main considerations, a heavy body linseed oil is not only desirable, but indispensable. Any addition of gum reduces the pliability of the film, and any boiling or heating decreases the elasticity.

Some gums, Para rubber, for instance, are being used in combination with linseed oil with beneficial results in some particular cases. The difficulty of incorporating rubber with linseed oil, the tendency of the rubber to separate; its peculiar action in preventing to quite an extent the drying of the linseed oil, have been serious objections to its use. It has, however, some very desirable characteristics which will be subsequently described.

Many other ingredients or materials could be here mentioned which, by their association with pure linesed oil in liquid form, modify the resulting film to such an extent as to render the use of linseed oil possible in places where alone it would be useless. For instance, a pure linseed oil film by itself is not an insulating material; but if we dissolve in linseed oil, either ozokerite or cerezine, the compound linseed oil film resulting from such addition will have remarkable insulating properties.

COMPOUND FILM OF LINSEED OIL AND OTHER OILS.

If we add to linseed oil in the proportion of 20 to 25 per cent. another vegetable oil, as, for instance, cottonseed oil, having a specific gravity of 0.9306, the specific gravity of linseed oil being, at the same temperature, 0.9350, the mixture of the two oils will give a compound oil having the very same aspect, fluidity, color or viscosity as that of linseed oil. Tested as to color through the tintometer or colorimeter, no change will be noticeable.

Such mixture will show the same degree of miscibility with pigments, and with whiting; it will work equally well under the brush. The proportion of 20 per cent. of cottonseed oil (although cottonseed oil is a non-drying oil) will not prevent the formation of a solid film, in all external appearances very near like that produced by pure linseed oil.

So, if it is difficult to detect admixtures of other oils with linseed oil, by means of a chemical analysis, it is not a simpler problem to get at actual facts by the most careful examination of the color, the gravity, the body or the spreading capacity of the oil, so long as it remains in liquid form.

It is a different matter, however, when the oil is dry, and when the film is sufficiently solidified to identify its nature by examining, for instance, its degree of adhesiveness.

Although in this case we experiment with a drying and a non-drying oil mixture, the characteristics of linseed oil will predominate in the proportions above indicated. But the drying will be only superficial, and the part underneath the film will remain greasy for several months, thus impairing the adhesiveness and its solidifying throughout.

The same remarks apply to the addition of a mineral oil and especially the neutral filtered lemon oil of 33 to 34 gravity, to linseed oil. Of course in this case we have a more or less reliable qualitative test by means of a soda solution which will saponify the linseed oil and leave the non-saponifiable mineral oil unaffected. But a still simpler test will be found in the film produced. A compound oil made of 80 per cent. linseed oil and 20 per cent. neutral oil or paraffine oil, looks very much like linseed oil; but when we grind either zinc or lead with it, the resulting white paint film will dry yellowish and "spotty," while a pure linseed oil submitted to the same test will remain white for some time.

LINSEED OIL OLEOMETRIC TEST ACCORDING TO DONNY.

The oleometer of Lefebre is no doubt a very delicate instrument, as is the case with the thermic areometer of Pinchon, but the difference in the specific gravity of vegetable oils is so slight that when we place an oleometer in the glass graduate containing raw linseed oil it takes a long time before the stem of the instrument correctly registers the specific gravity corresponding to a given temperature. The operation is rendered still more difficult when a mixture of 20 per cent. cottonseed oil or other oil with 80 per cent. of linseed oil is to be compared with a standard sample of pure linseed oil. The specific gravity of the two samples is so very near the same that the oleometer at its best is a very poor instrument.

We may here present the matter of testing compound oils in comparison with linseed oil by a method which precludes intricate laboratory operations and even the use of thermometer, oleometer, areometer, colorimeter or any other instrument. We do not wish to attach too much importance to this test, but as it is simple and practical it is certainly interesting and worthy of special mention. This test is termed the oleometric process of Donny. In the adjoining illustration it is applied to linseed oil. We give it in all its details so that any one who cares to duplicate the test may do so even without laboratory or chemicals.

In four glass graduates of cylindrical form, as shown in the illustration, we place pure linseed oil, and by this we mean well settled linseed oil, which we take as a standard for comparison with other oils or compound oils.

We know that the specific gravity is different in vegetable oils at different temperatures. In this case we need not even take the temperature of the oil, but simply let the four glass graduates containing the linseed oil stand in the same room for a certain time, preferably over night. The temperature of each one of the four samples of oil will be as near the same as any ordinary thermometer can indicate.

Now we need no thermometer nor areometer to take the specific gravity of the four linseed oil samples; in fact, it is immaterial to know what, at that temperature, the specific gravity of the linseed oil may be.

If we impart an artificial red color by means of alkanet root, for instance, to the oil to be tested and let this colored oil fall drop by drop into one of the four glass graduates containing pure linseed oil, the colored drops of oil added to the linseed oil will either float on the surface, forming a red strata, which will indicate that the oil added is lighter than the linseed oil, or the colored drop will be seen very gradually sinking, carrying with it its red color and forming a red strata at the bottom. This will indicate that the oil added is of heavier specific gravity than linseed oil, and finally, should the oil added be pure linseed oil, the drop of oil in its fall will not float on the surface of linseed oil in the glass graduate, but remain suspended in the liquid without any tendency to rise to the surface or sink to the bottom.

The drop of oil acts as an oleometer of the utmost sensitiveness; any difference of specific gravity will be registered at once. Should the oil to be tested be heavier than the pure sample of raw linseed oil adopted for comparison the drop of oil will sink, as is the case with castor oil; or, if it is lighter, it will have a tendency to rise to the surface, as is the case with cottonseed oil or poppy oil. The object of coloring the oil that is to be tested is simply to enable the operator to see more readily the exact position of the drop in its fall and to follow more readily its upward or downward movement through the column of oil.

If we repeat this simple test with mixtures of oils or with other vegetable oils, taking pure linseed oil as a standard for comparison, we will always find the same conclusions as registered above.

A drop of boiled linseed oil will sink in raw linseed oil; a drop of bleached oil will float on the surface of boiled oil; a drop of poppy oil will float on the surface of linseed oil, poppy oil and linseed oil being lighter and boiled linseed oil being heavier than raw linseed oil.

The experiment may be reversed by placing linseed oil in the dropper and the liquid oil to be tested in the glass graduate. It is this test which we have shown in the adjoining illustration.

DISSOLVING POWER OF LINSEED OIL.

The dissolving power of linseed oil is utilized in the preparation of coatings which give, in drying, compound films of peculiar characteristics. Linseed oil dissolves metallic oxides, forming metallic soap solutions; it dissolves also mineral waxes of the hydrocarbon family, such as ceresine, ozokerite, paraffine; also camphor, phosphorus and iodine, in more or less proportion.

All animal and mineral oils are miscible with linseed oil in any proportion, the heavier oils, however, having a tendency to separate. So it is the case with lighter oils (such as cottonseed) containing a large proportion of margarine. In Winter a mixture of linseed oil and cottonseed oil becomes soon noticeable by the precipitation of heavy flakes of margarine, the linseed oil being then the supernatant fluid, with the demargaranized cottonseed oil mixed with it.

Oleate and resinate aniline colors dissolve in linseed oil, and pigments are, if not soluble, at least miscible in all proportions.

A putty containing only 3 per cent. of linseed oil and 97 per cent. of whiting is not very plastic, the proportion of oil being too small to impart a high degree of plasticity. Still when this putty is exposed to atmospheric influences it hardens like a cement, and thus tends to illustrate another of the valuable characteristics of linseed oil, its property as a size or "binding material."

Very few solid substances are soluble in linseed oil at the ordinary temperature, but under the action of heat many dissolve readily. Waxes require a gentle heating and fossil resins, such as Kauri, and other vegetable varnish gums, such as copal, must be first melted at a high temperature before being soluble in linseed oil equally heated.

Certain gummy substances, such as gutta percha or India rubber, cannot be dissolved in linseed oil directly, but if dissolved first in a suitable solvent, such for instance as chloroform, this solution itself, when added to linseed oil, acts as a conveyor of rubber to the oil, which then dissolves it. As to the chloroform, it can be recovered by volatilization and condensation.

Any fixed oils, gums or mineral substances added to linseed oil will, if soluble in the oil, modify the gummy nature of the resulting film when dry; if insoluble, the resulting compound film will be an opaque coating with the varnish-like appearance of linseed oil predominating.

If a coat of linseed oil is applied on a surface and some vegetable or mineral substance in powdered form be dusted on the coating of oil before it is completely dry, the powdered substance will adhere to the oil with a great firmness and covering it. On this is based the manufacture of linoleum.

(To be continued.)

(Special Correspondence to the Reporter.)

The Production of Sulphur and Pyrites.

Washington, June 24, 1898.

The U. S. Geological Survey has completed its annual report on the production of surphur and pyrites, and, through the courtesy of the compiler, Prof. E. W. Parker, the Reporter's correspondent, is enabled to present an advance abstract thereof. An interesting feature of this year's report is the discussion of the extent to which pyrites have displaced sulphur in the production of sulphuric acid, etc., and the increased consumption of pyrites "fines."

"Compared with the domestic consumption of sulphur," says Mr. Parker, "the production in this country continues to be of small proportions. The United States consumes annually about 125,000 short tons of sulphur, in addition to the iron pyrites, domestic and imported, used in the manufacture of sulphuric acid. The largest production of sulphur in this country, so far as records are obtainable, was in 1896, when the output amounted to 5,260 short tons, valued at $87,200. The average yearly production for the sixteen years previous to 1896 was 1,372 tons. The largest production in this period was in 1887, when 3,000 tons were mined in Company, now out of existence. In Utah by the Dickert & Myers Sulphur two years, 1888 and 1890, no production was reported. During 1897 the production was 2,275 short tons, only 43 per cent. of the amount produced in 1896, but an increase of 68 per cent. over the average yearly production in the sixteen years preceding 1896. The increased output in 1896 was due to the operations of the Frasch process in Louisiana. This process consists in melting the sulphur by superheating water and pumping or forcing it to the surface. The principles of the 'air lift' pump have recently been applied to this enterprise. About 80 per cent. of the product in 1896 was from the Louisiana deposit. These works were shut down the greater part of 1897, and the production there was only about one-fourth of what it was the preceding year. The mines of the Black Rock, Utah, produced about the same amount as in 1896, and a little more than one-half the total product in 1897. The Utah deposits are extensive, and yield an excellent quality of sulphur, but, owing to the expense attached to railroad transportation, the product has been restricted to a comparatively local market. At the time of writing this report the prices of sulphur have advanced to unusually high figures—more than one and one-half times the average for 1897. The advance has been due to the existence of hostilities between the United States and Spain, sulphur being classed as contraband of war, and the United States being dependent chiefly upon foreign sources for her supply. It is possible that this condition of affairs, particularly the incentive of remunerative returns consequent upon the advance in prices, will not only stimulate production in the two regions mentioned, but attract attention to and cause the early development of our properties.

"Owners of the sulphur deposits in Western Texas have been actively pushing the work of thoroughly prospecting the locality, but the information furnished by the Survey as to the extent and economic value of the sulphur has been given with the understanding that it would not be published until all formalities necessary to perfection of title, etc., have been complied with.

"Sulphur deposits in Eastern Texas, in the vicinity of the city of Beaumont, have attracted attention, and preparations are being made to develop them.

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A plant for mining the sulphur and for making sulphuric acid is to be constructed about four miles from Beaumont on the Sabine and East Texas railroad. With the United States at present depending upon the island of Sicily for five-sixths of her sulphur supply, and upon foreign sources generally for 98 per cent. of her total consumption, and with this article declared contraband of war, it would seem that the present is the golden opportunity for development of American sulphur deposits.

"The following figures show the product of sulphur in the United States during the past seven years: 1891, 1,200 short tons, value $39,600; 1892, 2,688 tons, value $80,640; 1893, 1,200 tons, value $42,000; 1894, 500 tons, value $20,000; 1895, 1,800 tons, value $42,000; 1896, 5,260 tons, value $87,200; 1897, 2,275 tons, value $45,590.

"In discussing the production, importation and consumption of sulphur, the use of iron pyrites in the manufacture of sulphuric acid must be considered. During the past decade iron pyrites has become a formidable rival to sulphur, but it is for the past seven years only that reliable statistics are available. Previous to 1884 pyrites was included with other sulphur ores in the report of imports published by the Treasury Department. From 1884 to 1887 and since 1891 iron pyrites containing not more than 3.5 per cent. of copper has been reported separately. In 1887 the pyrites imported into the United States amounted to only 16,578 long tons, and the domestic product was only 52,000 long tons. Four years later (1891), when the imports were not reported, they amounted to 100,648 long tons, and the domestic product more than doubled. Assuming that pyrites, imported and domestic, contained an average of 45 per cent. of sulphur, it is seen that in 1891 93,233 long tons of sulphur was displaced by pyrites, of which 45,292 long tons was from imported ores. In the same year it is shown that the imports of crude sulphur amounted to 116,971 long tons, against 162,674 long tons in 1890, a decrease of 45,703 long tons, substantially the same as the amount of sulphur contained in imported pyrites. The imports of sulphur decreased again about 16,000 long tons in 1892, while the sulphur contents of imported pyrites increased about 23,000 long tons. In 1893 there was an increase of 4,600 long tons in the imports of sulphur, an increase of over 19,000 long tons in the sulphur contents of imported pyrites, and a decrease of over 15,000 long tons in the sulphur contents of domestic pyrites. Previous to this, since 1887, there had been a constant increase in the production of iron pyrites. In 1895 is seen an increase of nearly 20,000 long tons in the imports of sulphur, and of 13,573 long tons of sulphur in domestic pyrites, and a decrease of 13,119 long tons in sulphur contained in foreign pyrites. During 1895 the imports of sulphur showed a decrease of 4,000 tons. The production of domestic pyrites also decreased, the sulphur contents being 3,000 tons less than in 1894, while the sulphur contents of imported pyrites in 1895 were 11,000 tons in excess of the preceding year. In 1896 there was an increase all along the line, the total sulphur consumption showing a gain of 32,500 tons over the preceding year. Another large increase in the total consumption is indicated in returns for 1897. The aggregate was 35,000 tons more than in 1896. This increase was entirely in the use of iron pyrites. The production of domestic pyrites increased nearly 28,000 long tons, the sulphur contents showing an increase of about 12,500 tons. The sulphur contents of imported pyrites, as estimated, increased 26,700 tons, while sulphur, imported and domestic, shows a decrease of about 4,200. In the six years from 1891 to 1897 the consumption of sulphur in the United States has grown from 211,275 to 319,830 long tons, an increase of 108,555 tons, or a little more than 50 per cent.

"As the bulk of the sulphur product of the world is obtained from the island of Sicily, it follows that conditions which effect the sulphur industry of Sicily materially influence the sulphur industry of the world.

"In 1896 the combination or 'trust' known as the Anglo-Sicilian Sulphur Company, Limited, of London, England, began its operations. Under its contracts it secured control of 70 per cent. of the entire output of Sicily, guaranteeing the producers a fixed price of $15.94 per ton, with an advance of 1 cent per ton on every 3 per cent. reduction of output ordered, this rate being based on an annual production of 340,000 tons. The export duty previously imposed was practically abolished by the Italian Government, an exaction of only 1 lire per ton being made. Prices for Sicilian sulphur had been greatly demoralized for two or three years prior to the syndicate taking hold. In 1895 and the early part of 1896 they were the lowest ever known. Best unmixed seconds sold in New York in March, 1896, at $15 per ton. After this they advanced steadily, under the manipulations of the syndicate, until $25 per ton was reached in October. This high figure, however, could not be maintained, notwithstanding the strength of the syndicate and the increased consumption in the United States. The price declined until a point about midway between the above extremes was reached in the early months of 1897.

"The Anglo-Sicilian Sulphur Company controls not only the greater part of the sulphur product of Sicily, but also the sulphur recovered in England from alkali waste. The first annual statement issued by the company ends with July 31, 1897. It shows that the company received from the producers 267,795 tons of sulphur during the year. This would have been increased to about 300,000 tons were it not for the fact that some sulphur (about 50,000 tons), remained to be delivered by the producers upon contracts made prior to the one entered into with the Anglo-Sicilian Company. The financial statement of the company shows that the gross profits for the year amounted to about $340,000. From this were deducted the expenses incurred in Sicily and London, about $95,000, making net profits amounting to about $245,000. From this $32,000 was written off for good will and preliminary expenses, and the balance, after placing about $45,000 to the capital guaranty fund and the general reserve, was distributed as dividends to the shareholders.

"That the operations of the syndicate have encouraged the use of pyrites in acid making is evinced by the increased production and importation of this sulphur ore. The production of iron pyrites has increased from 99,549 long tons in 1895 to 143,201 tons in 1897. Imported pyrites increased from 190,435 tons in 1895 to 259,546 tons in 1897. The two show a total increase of about 113,000 long tons, or nearly 40 per cent. There was a slight decrease in the imports of sulphur in 1897. It is the opinion of many familiar with the sulphur industry that the minimum limit set by the company as the basis of its contracts is in excess of the consumptive demand, and that accumulations of sulphur at shipping points are bound to occur. Increasing consumption of pyrites for acid making will without doubt cause a still wider gulf between the supply of and the demand for Sicilian sulphur. Indications at present that under ordinary circumstances the syndicate will have to order a restricted production, involving an increased cost to it, or obtain concessions from its original contracts with the producers. Aside from the error in making the minimum limit and the increasing consumption of pyrites, the syndicate is somewhat at the mercy of independent miners, who are able to sell sulphur at prices below those at which the syndicate can afford to sell under its contracts.

NEW FOREIGN SOURCES.

"During 1897 considerable exploitation work was carried on upon some deposits in Lower California (Mexico), about 1,000 tons of ore being produced, and which was ready for shipment on Jan. 1, 1898. The operations are being conducted by American capitalists, who have formed a corporation under the title of the American Sulphur Company, with main office in Pittsburgh, Pa., and branch office in Yuma, Ariz. The deposit is said to be only seven miles from the Colorado River, near where it empties into the Gulf of California, to which the building of a railroad is contemplated. Shipments to Western United States markets can be made via river barges to Yuma and distributed from there by rail. Eastern shipments can be made by sailing vessels through the Gulf. The method of mining the ore is said to be simple. Wagons are driven into the deep vertical cuts, the walls of which are of sulphur, and the ore is simply broken down and loaded in the wagons by means of chutes. Very little time is required to load a two-ton wagon, and another immediately takes its place.

"Interest has also been aroused in the contemplated development of the sulphur localities in the crater of Orizaba Peak, between the City of Mexico and Vera Cruz. This peak is said to be the highest on the American continent, having an altitude of 17,372 feet. European capitalists are reported to be considering the purchase of some of the sulphur beds convenient to railways.

"Sulphur beds in the Island of New Zealand are being actively exploited. The beds are located at Tikitere, about ten miles from Rotorua. The development of this industry has been due to the high prices of Sicilian sulphur. About 200 persons are employed in mining the sulphur and preparing it for export. The product is shipped in bags to acid makers in Auckland and Sydney.

PYRITES.

"The substitution of iron pyrites for sulphur in the manufacture of sulphuric acid continues to increase. This is abundantly shown by the growth of the pyrites-mining industry in this country and the increased use of imported pyrites. The production of pyrites in 1897 amounted to 143,201 long tons of 2,240 pounds, against 115,483 tons in 1896, a gain of 27,718 tons, or 24 per cent. The output in 1896 was the largest up to the time, being nearly 16,000 tons more than in 1895 and nearly 6,000 in excess of the production in 1892, in which year the largest previous production was reported. In sixteen years the production of pyrites for acid making has grown from 12,000 to 143,201 tons, and this has been in the face of steadily growing importationns. It is not possible to trace the import statistics further back than 1884, as pyrites previous to that year was classed as and included with sulphur ores. In 1888, 1889 and 1890, under a new classification, pyrites was included among other iron ores. In four years from 1884 to 1887, inclusive, the imports of iron pyrites was significant, averaging a little over 10,000 tons per year. In 1891, two years later, the imports had jumped to 100,648 tons, and during the four years 1890 to 1893, about 153,000 tons per year. In the last three years the average annual imports amounted to 216,716 tons. Dividing the period of sixteen years of which there is any record of domestic production (1882 to 1897) into four equal parts, we find that from 1882 to 1885, inclusive, the total production was 121,000 long tons, an average of 30,250 tons per year. In the next four years the total output was 255,036 tons, a yearly average of 63,759 tons. From 1890 to 1893, inclusive, the total production was 391,955 tons, or an average of 97,989 tons per year. In the last four years the total production has been 464,173 and the average production per year 116,043 tons. This steady and rapid growth in the domestic production of pyrites, and the coincident increase in the imports, are clearly indicative of the growing sentiment in favor of iron pyrites as a source of acid making by American manufacturers and the tendency to make themselves independent of the Anglo-Sicilian syndicate.

"The increasing use of pyrites is not confined to the United States. England, Germany and France are now large consumers. Spain is one of the most important sources of supply for the European market, and furnishes a large percentage of the pyrites imported into the United States. France produced in 1896 295,325 long tons of pyrites, valued at $687,273, and averaged about 245,000 tons in the five years from 1891 to 1895, inclusive.

"The Revista Minera de Espana reports the amount of pyrites exported from Spain (the principal source of this ore), in 1895 to have been 480,255 long tons. Four years before, in 1891, the exports were 279,161 long tons. In 1892 they were 435,906 long tons; in 1893, 393,453 long tons; in 1894, 511,769 long tons, and 480,255 long tons in 1895. These are the latest figures available. The figures of production which have been published (100,000 metric tons in 1896) are evidently erroneous.

"The amount and value of pyrites mined for sulphur contents in the United States in the past seven years have been as follows: 1891, 106,536 long tons, value $338,880; 1892, 109,788 tons, value $305,191; 1893, 75,777 tons, value $256,552; 1894, 105,940 tons, value $363,134; 1895, 99,549 tons, value $322,845; 1896, 115,483 tons, value $320,163; 1897, 143,201 tons, value $391,541.

"The following figures show the amount of pyrites mined and imported for the past five years, and, as no exports are reported, they may be accepted as representing the domestic consumption; an estimate is also given of the amount of sulphur displaced each year, on a basis of 45 per cent. of sulphur contents.

"The domestic consumption of iron pyrites: 1893, 270,711 long tons, sulphur displaced, 121,815 tons; 1894, 269,486 tons, sulphur displaced, 121,269 tons; 1895, 289,984 tons, sulphur displaced, 130,493 tons; 1896, 315,651 tons, sulphur displaced, 142,097 tons; 1897, 402,747 tons, sulphur displaced, 181,236 tons.

INCREASED CONSUMPTION OF PYRITE "FINES."

"In the earlier days of pyrites mining the impression prevailed that only the larger pieces of ore could be utilized in the roasting furnaces for making sulphuric acid, and the small stuff or 'fines' was considered a waste product. Hence it was that, although millions of tons of granular or 'fines' pyrites have been mined during the last thirty-five years, no practical process for the burning or roasting of the same (to utilize the contained sulphur) was introduced until about the year 1889, when Peter Spence, in England, succeeded in mechanically producing a result which up to that time had been produced only in a moderately successful manner by shelf furnaces, of which there were several types. Since that date (1880) the opening of the American mines has made it necessary to have some mechanical furnace that would consume the 'fines,' and that would enable the producers to market the larger proportion of their mine products, as it is well known that an average of at least 60 per cent. of all American pyrites ores is in granular form when mined.

"In the year 1883 the Spence mechanical furnace was introduced in the United States by Mr. William H. Adams, and in that year 3,000 tons of granular pyrites were burned. During the years which have succeeded this introduction the American mines have produced probably 400,000 tons of this class of ore, and there has been imported over one-half as much more, showing that constantly improved processes have been devised for the purpose of working 'fines,' and have been the means of marketing a mine product once supposed to be worthless.

"For the year 1897 the consumption of granular ores in the United States was not less than 100,000 tons, and the changes now being made in nearly all of the chemical plants of this country are intended to utilize granular pyrites in place of brimstone, and in several places in place of lump pyrites ores.

"It is now possible to construct a mechanical furnace, at a cost of $1,500, which will perfectly roast 7,700 pounds of granular ore in twenty-four hours. Such a furnace requires but little attention and no extra cost of labor, thus meeting the many objections put forward by chemical manufacturers for the last twenty years. Larger furnaces, which will roast 25,000 pounds of American ores daily, are constructed at a cost of £3,000. This mechanical operation solves many of the disagreeable problems which faced the owners of chemical works, and it is not impossible that we shall see granular ores, or 'fines,' and mechanical furnaces supplanting lump-ore and other forms of furnaces for the production of sulphuric acid gas, made from pyrites ores."

The Commercial Analysis of Bauxite.

BY WILLIAM B. PHILLIPS AND DAVID HANCOCK.

The Bauxite mined in Georgia and Alabama, constituting practically all of the domestic supply, is used for the manufacture of alum and aluminium, in the proportion of about three-fourths to one-fourth. The analytical methods hitherto employed have been based, to a considerable extent, upon the purposes to which the material was applied.

It is obvious that the easy solubility of the alumina in sulphuric acid is a great desideratum for the manufacturer of alum, and, furthermore, that the acidulated mass should filter readily, and be capable of rapid washing.

But it is generally impracticable for the ordinary chemist to base his methods on factory tests, for the reason that these are, for the most part, unknown to him. All that can reasonably be required of him is that his methods should not yield results widely at variance with those obtained on a large scale in actual operations.

Were the question of bauxite analysis one solely of the total amount of alumina, almost any of the methods used for the estimation of this substance in the presence of silica, oxide of iron, and titanic acid could be employed. But the total amount of alumina is of secondary importance as compared with its ready solubility in sulphuric acid in the manufacture of alum.

Whatever may be said as to the requirements of the manufacturers of aluminum, it is certainly necessary in the manufacture of alum that sulphuric acid should readily dissolve the alumina. One might go a step further and allow that the residue after treating with acid should be of such nature as to permit of rapid and thorough wash-

ing. This latter consideration, however, is not of such vital importance in the valuation of bauxite as that the material should dissolve readily in the acid, and that no substance deleterious in alum-making should at the same time go into solution. It seems to us that there are four main points to be considered in valuing bauxite by analysis for alum-making. Ranging them in the order of their relative importance, they are as follows:

1. Easy solubility of the alumina in sulphuric acid.
2. Rapid filtration.
3. Rapid washing.
4. Freedom from substances that on going into solution would affect the quality of the alum, or other products.

There may be, of course, a difference of opinion as to the relative importance of the second, third and fourth considerations, but there can be no doubt of the rank of the first.

If the bauxite is ferruginous, the fourth point may come second, but at present and for some time to come the purer bauxite alone will come into the market. There is very little demand for second grade material, and while the percentage of ferric oxide is to be held in view in valuing even the pure bauxite, it is not of much importance, for the reason that it is generally very small.

The Georgia-Alabama bauxite consists of the trihydrate of alumina, $Al_2(OH)_6$, or $Al_2C_3,3H_2O$, mixed with clay, and what may prove to be a lower hydrate of alumina, possibly $Al_2O_3.2H_2O$.

There are three well recognized hydrates of alumina—the monohydrate (disapore), $Al_2O_3.H_2O$ or $Al_2O_2(OH)_2$, containing:

	Per cent.
Alumina	85.02
Water	14.98

the dihydrate, $Al_2O_3.2H_2O$ or $Al_2O(OH)_4$, with

	Per cent.
Alumina	73.94
Water	26.06

and the trihydrate (Hydrargillite, Gibbsite), with

	Per cent.
Alumina	65.41
Water	34.59

The formula for bauxite, $(AlFe)_2O(OH)_4$, given by Roscoe and Schorlemmer, does not seem to apply to the American material. Assuming for the present that the domestic bauxite is a mixture of alumina trihydrate, clay, and possibly a lower hydrate, the methods adopted for its analysis, so far as concerns the alum-maker, should be based upon the estimation of two different things: (1) the amount of alumina existing as trihydrate, and very readily soluble in sulphuric acid, and (2) that existing as some other compound, whether by a lower hydrate, or clay, less soluble in the acid, but which in the process of manufacture can be utilized. It would appear that the more easily soluble alumina should have a higher value placed upon it than the other. It costs less to make alum of material easily soluble than of material difficultly soluble, and if there exists in bauxite two or more alumnia compounds, differing markedly from each other in solubility, the consumer is entitled to know what are the proportions between them.

Heretofore the analytical methods adopted, outside of factories, for the valuation of bauxite, have resulted in giving practically all of the alumina, and no efforts have been made, so far as known to us, to discriminate between the alumina compounds present.

The two methods ordinarily used are the Pittsburg, worked out by Mr. James O. Handy, and the Spence method. Both of these agree in evaporating the mixture of sulphuric acid and bauxite to fumes of the so-called sulphuric anhydride and continuing the heat for some minutes. Mr. Handy recommends a mixture of hydrochloric acid of 1.20 sp. gr., nitric acid of 1.42 sp. gr., and sulphuric acid of 1.20 sp. gr., in the respective ratio of 1 : 3 : 6. Mr. Spence uses a mixture of equal parts of strong sulphuric acid and water. In each case the ratio between acid mixture and bauxite is the same, viz., 1 gram bauxite and 5 cc. acid. In using either method, taking up the residue in water, boiling, filtering, and washing thoroughly, very little alumina will be found in the residue. From numerous analyses we have found that considerably less than 1 per cent. of alumina is left in the residue, so that it may be said that practically all of it is dissolved.

More or less objection has been urged by alum-makers to these methods. They have claimed that for their purposes the yield of alumina is too high, that by carrying the analytical treatment to fumes, whether using the mixture of acids, or sulphuric acid alone, compounds of alumina, which are not suited for the manufacture of alum, are decomposed and dissolved, and consequently the percentage of alumina does not represent what may fairly be considered as soluble alumina.

Aside from manufacturing processes, upon the discussion of which we do not enter, the objections seemed reasonable, and we began a series of investigations on commercial bauxite, not so much with the purpose of studying the exact composition of this material as of ascertaining whether a practical method of discriminating between the several compounds of alumina present in bauxite could be worked out The results reached are extremely interesting and important alike to the shippers and the consumers, for they seem to indicate that it is perfectly feasible to determine the alumina existing as trihydrate, and therefore readily soluble, and the alumina as clay, or as a lower hydrate, and of less solubility.

From a lot of about 300 pounds of bauxite taken from the loading shed of a company actively engaged in mining and shipping for alum works, five separate samples were taken.

A. A general average of the whole lot, lump and fine.

B. A white, friable material, with no iron stains.

C. A compact, cream-colored variety, with concholdal fracture and pearly luster.

D. A variety full of nodules considerably stained with iron.

E. A clay, probably halloysite.

A separation of these varieties by elutriation was not possible, as they gave the following specific gravities:

	Sp.gr.
B	1.77
C	1.74
D	1.74
E	1.76

Two grams of A, through a sixty-mesh sieve, were treated with 10 cc. sulphuric acid of 50° B., in a steam-bath at 100° C., for the time given below, 100 cc. water added, and the contents of the flask heated in the bath for ten minutes. It was then filtered and washed thoroughly with hot water.

	Per cent.
Alumina extracted in two hours	53.37
Alumina extracted in one hour	53.18
Alumina extracted in one hour	53.21
Alumina extracted in one-half hour	51.27

The other samples were similarly treated for one hour. None of the solutions contained titanic acid, and only a small percentage of iron oxide was dissolved.

The insoluble residues were dried at 100° on tared filters, and weighed, then ignited and weighed again, the difference being taken as combined water. The amount of water combined with the alumina dissolved was ascertained in two ways:

1. By deducting the weight of the insoluble residue, dried at 100°, from the total weight of substance taken, and, from this result, deducting the sum of the weights of alumina, ferric oxide, and moisture.

2. By deducting from the total loss on ignition the amount of combined water in the insoluble residue, and moisture.

The first method is probably more nearly correct.

The results of the analyses are as follows:

Soluble Portion.

	A.	B.	C.	D.	E.
Moisture	0.70	0.38	0.94	0.56	0.45
Ferric oxide	0.93	0.21	0.21	0.96	0.20
Alumina	53.21	58.03	58.94	48.69	3.11
Combined water—					
(1st method)	28.28	30.78	31.00	25.77	1.87
(2d method)	28.17	31.14	31.31	25.90	1.05
(Mean of 1st and 2d)	28.23	30.96	31.15	25.83	1.46
(Calculated)	28.20	30.75	31.26	25.80	1.64

Insoluble Portion.

Combined water	1.79	1.10	0.91	2.59	12.83
Alumina	4.15	2.69	2.39	7.48	37.70
Silica	7.28	3.06	2.40	8.85	42.88
Titanium oxide	3.63	3.70	3.08	4.82	1.10

These results point strongly to the formula $Al_2O_3.3H_2O$, or $Al_2(OH)_6$, for the substance dissolved. The iron is probably in the hydrated condition. If so, this would introduce a small correction, which, however, would be partially compensated by slight action on the clay residue, which will be mentioned later on. The figures for the soluble part have been verified in every case by duplicates, and in some cases by many analyses; as, for instance, in E, where it becomes very difficult to obtain accurately the per cent. of water, owing to the large amount of insoluble residue.

Little can be said as to the composition of the insoluble residue, but these results, and many others which do not properly belong to the present discussion, seem to indicate that it consists chiefly of a halloysite or kaolinite clay, and that the larger portion of the titanium exists as the hydrated oxide, either titanic or metatitanic acid; that it also contains valuable amounts of quartz or silicious sand, and it is not improbable that corundum and rutile are present in minute amounts, though neither have been identified with certainty.

The valuable constituent beyond a doubt is aluminum trihydrate, and the most reasonable settlement of the commercial question, it seems, would be to make this the basis of sales in the future. It might be argued that the alumina yield would be larger in this case than the analysis would indicate, as ordinary treatment will remove some alumina from clay.

To arrive at a fair conclusion in regard to the matter, it would appear necessary to further limit and define the word "bauxite," as applied to the Georgia-Alabama mineral. If the results given in this paper prove anything, they certainly show that in the so-called bauxite there is a sharp line of division as regards chemical action under certain conditions.

In outlining this work originally, it was intended to treat samples at various degrees of temperature, with various strengths of acid, the samples also to vary in their state of subdivision. Other work has, however, prevented this, but enough has been done to throw some light on the question here involved. Acid of 40° B. dissolves practically the same per cent. of alumina as acid of 50° B. The substance passed through a sixty-mesh sieve gives the same per cent. of soluble alumina as when all is passed through a 100-mesh sieve.

Some results have already been given showing difference in time of treatment. All results obtained indicate that if any of these variables of time, temperature, strength of acid, or subdivision, be taken in regularly increasing increments, the per cent. of alumina dissolved increases rapidly at first and soon becomes fixed, the ratio $Al_2O_3.3H_2O$ being unaffected, and afterwards the per cent. of alumina increases again, the ratio then approaching $Al_2O_3.H_2O$.

Clearer proof could hardly be desired that bauxite, as we know it, is a mixture, and not a true chemical compound. The same result exactly would be obtained if workmen were directed to mix clay and the mineral, and the methods now in use would not detect the change, at least only partially. They would show a lowering of the per cent. of alumina and increase of silica, but in nothing like the true amount of the addition, while a determination of $Al_2(OH)_6$ would detect it absolutely.

In order to establish the method on a scientific basis it is required to prove (1) that all alumina existing as $Al_2O_3.3H_2O$ is extracted, and (2) that it is contaminated by alumina from no other source.

Samples A and E were used for this purpose, the alumina being first extracted in the usual way, using 2 grams of substance and 15 cc. of 50° B. sulphuric acid at 100° C. for one hour, the residues washed free of alumina and dried at 100°, retreated in the same way, etc.

	Percentage of soluble alumina. A.	E.
First extraction	53.18	3.21
Second extraction	0.22	1.20
Third extraction	——	1.08

Certainly no considerable amount of $Al_2O_3.3H_2O$, could have remained or it would have appeared in the second extraction of A, but it seems that the reagent decomposes slowly, as is shown by E, and it is probable that the additional alumina in A comes from the clay of the residue. It is intended at some time in the future to ascertain the minimum strength of acid which will extract at 100° C. in one hour all $Al_2O_3.3H_2O$, and it is possible that the action on clay may become very slight and a correction be determined and applied.

Results are quite close enough for commercial purposes, and while it is possible that these may vary three or four-tenths or even five-tenths of one per cent. from the true figure for alumina existing as $Al_2O_3,3H_2O$, the error is always in the same direction, and when the process is carried out in exactly the same way each time results are remarkably concordant.

As illustrating this the following results are given; they were made as checks per cent. of soluble alumina:

	A.	B.	D.	E.	D.
1	53.21	58.03	58.94	48.69	3.11
2	53.18	58.00	59.05	48.80	3.12
3	53.14	58.10	59.00	....	3.08
4	53.26	....	....	....	....

It should be noticed that the error of the determination will depend upon the amount of the residue. A bauxite of average composition would give about 20 per cent. of insoluble residue, and the soluble residue would probably be 0.25 per cent. too high, and the calculated $Al_2(OH)_6$ about 0.35 per cent. too high.

We beg, therefore, to recommend that instead of carrying the analytical treatment of fumes of so-called sulphur trioxide, there be substituted the treatment with 50° B. sulphuric acid at 100° C. for one hour. We give at the conclusion of this paper our method of analysis. It may be of interest here to give some comparative results by the different methods.

A bauuxite, containing by the Pittsburgh method 59.20 per cent. of soluble alumina, was found by our method to contain 57.22 per cent. Another sample with 56.26 per cent. of soluble alumina by the Pittsburgh method gave by our method 53.38 per cent.

A sample with 60 per cent. soluble alumina by the Pittsburgh method gave us 59 per cent.; another with 54.87 per cent. gave us 53 per cent. Speaking generally we have found that the difference between the Pittsburgh method, or the Spence, and our method is less the purer the bauxite. This result may be anticipated, for the purer the bauxite the more of the alumina does it contain as the trihydrate.

Under the proposed change in the method of valuing bauxite it would be necessary to fix upon some name for the alumina dissolved at 100° by sulphuric acid of 50° B, and for that dissolved at fumes. We suggest the term "free alumina" for the alumina dissolved at 100° C. and "combined alumina" for the difference between the and the alumina dissolved at fumes, the sum of the two to be known as "available alumina." For instance, if a bauxite contained 54 per cent. alumina soluble in 50° B. acid in one hour at 100° C. it would contain 54 per cent. of free alumina. If by the Pittsburgh or the Spence method there was found 58 per cent. "soluble alumina," we would now call this 58 per cent. of "available alumina," and there would be 4 per cent. of "combined alumina."

There is an objection to this system of nomenclature in that the free alumina is really combined, just as much so as the additional alumina extracted by fuming acid. It being combined with water in the form of the trihydrate, the exact meaning of the term should be that the free alumina is the alumina from the trihydrate, and easily soluble in sulphuric acid. This much may be taken as proved. We can not state at present in what form the alumina exists that we propose to call "combined alumina." It may be as clay, as a lower hydrate, or as a form of Al_2O_3 itself, insoluble except in fuming acid. It does not greatly matter in what form it exists, the chief thing to be considered being that it is not soluble in 50° B. sulphuric acid at 100° C., but it is soluble in acid brought to fumes.

It is not in the province of this paper to assign exact commercial values to the free and the combined alumina, or to the free and the available alumina, as this should be left to the decision of the miners and the consumers. In the fertilizer trade it has not been found difficult to agree upon the price of water-soluble phosphoric acid and available phosphoric acid, this latter being the sum of the soluble and the reverted. Acid phosphate is now offered in bulk at so many cents per unit of available phosphoric acid, and the higher the percentage of the available acid the higher the price per unit.

We propose to introduce into the alum trade a system which has been used for many years in the fertilizer trade, and which has been found to be extremely useful. In bauxite the difference between the easily soluble trihydrate and the difficultly soluble alumina in the residue, should be considered.

We are convinced that the changes proposed would be for the benefit of all concerned. Take for instance the case of a shipper, who is sending out bauxite containing clay, such as E; and we beg to say again that E was taken from a lot of bauxite ready for shipment. If the prepared bauxite should contain an undue proportion of E, with only 3.11 per cent. of free (or easily soluble) alumina, it goes without saying that its value for alum-making would be seriously impaired. Comparing E with C (and both varieties came from the same bag), E has 3.11 per cent. of free alumina and C has 58.94 per cent.; in the insoluble portion E had 37.70 per cent. of alumina and C had 2.39 per cent. In other words, the free alumina in E was 7.62 per cent. of the total alumina and in C it was 96.10 per cent.

Take another instance. With the very best bauxite there occurs a white clay which, when the material is ready for shipment, can not be distinguished from the bauxite itself. It may be mixed with

the bauxite in considerable proportions and yet fail of recognition because its physical qualities so nearly approximate those of pure bauxite. I nthe pits the lines of separation between bauxite and clay are perceptible indeed to the trained eye, but it is practically impossible to prevent the miners from overrunning the line. This is both theoretically and practically true. The situation at the mines renders it theoretically impossible to keep the clay out of the bauxite, and samples of clay picked out of the bauxite already mined show that it does occur in it. In pure bauxite the proportion of clay is at the minimum when the mine is operated from the middle of a big pocket of bauxite, but as the mining nears the sides of the pocket and approaches a bed of clay, the danger of admixture of clay increases, and when the pocket is almost exhausted and the mining is carried on close to the clay, more or less of this substance is sure to get in. The quality of the Georgia-Alabama bauxite is sufficiently high, as proved by the low silica and high free alumina, to preclude the possibility of there being much clay in it, but some clay is always present, so far as our observation goes, covering several years.

We have ourselves obtained samples of these clays from the bauxite mines. One of them came from immediately next to a pure bauxite. It contained 41.80 per cent. of total alumina, of which 2.08 per cent. was free, 37.75 per cent. combined and 1.97 per cent. insoluble. Of the total alumina 4.97 per cent. was free and easily soluble, 90.51 per cent. was "combined" and difficultly soluble, and 4.72 per cent. was insoluble in fuming acid.

Another sample gave 43.00 per cent. of total alumina, of which 3.00 per cent. was "free," 37.40 per cent. "combined," and 2.60 per cent. insoluble. Of the total alumina 6.97 per cent. was "free," 86.98 per cent. was "combined" and 6.05 per cent. was insoluble.

Compare these results with those obtained from sample E, remembering that these two were clay taken from the mines, and E is clay taken from bauxite already mined. For convenience of reference we will call the two clays F and G and put the comparative results in a table:

TABLE I.—CLAYS.

	Sample. E.	F.	G.
Free alumina	3.11	2.08	3.00
Combined alumina	35.45	37.75	37.40
Available alumina	38.56	39.83	40.40
Insoluble alumina	2.25	1.97	2.60
Total alumina	40.81	41.80	43.00
Total alumina=100—			
Free	7.62	4.97	6.97
Combined	86.86	90.31	86.98
Available	94.48	95.28	93.95
Insoluble	5.52	4.72	6.05

Now take three good bauxites:

TABLE II.—BAUXITES.

	Sample. A.	B.	C.
Free alumina	53.21	58.03	58.94
Combined alumina	3.55	2.29	2.04
Available alumina	56.76	60.32	60.98
Insoluble alumina	0.60	0.40	0.35
Total alumina	57.36	60.72	61.33
Total alumina=100—			
Free	92.76	95.57	96.10
Combined	6.19	3.77	3.32
Available	98.95	99.34	99.42
Insoluble	1.06	0.66	0.58

The analyses show very clearly that treatment with sulphuric acid to fumes dissolves alumina from such clays as occur with and in bauxite, and that treatment with acid at 100° C. does not dissolve this alumina. As regards bauxite itself, the treatment at 100° C. serves to discriminate between the alumina of the trihydrate and the alumina of clay, or of a lower hydration.

As to calcining the bauxite before shipment in order to remove the water of hydration, we do not think it advisable. In well-arranged bauxite plants the material is now heated in revolving cylinders to remove hygroscopic water, but the temperature should not be great enough to cause loss of combined water. In order to test the effect of loss of combined water on the solubility of the alumina at 100° C., we selected a very pure variety of bauxite and deprived it, by careful heating, of various percentages of its combined water, and then extracted the alumina with 50° B. sulphuric acid at 100°.

The results are in Table III.

The sample contained 60 per cent. of alumina.

EFFECT OF CALCINING ON SOLUBILITY—TABLE III.

	Soluble alumina. Per cent.
Dried at 100 deg. C. not calcined	59.00
Loss on calcining, 12.55 per cent	57.60
Loss on calcining, 18.55 per cent	57.10
Loss on calcining, 26.60 per cent	53.10
Loss on calcining, 32.15 per cent	20.40

Calcination certainly tends to decrease the solubility of the alumina, but does not constitute a serious menace until about 80 per cent. of the total combined water is removed. With a loss of about 38 per cent. of the water there is a loss of 1.40 per cent. soluble alumina; with a loss of about 58 per cent. of the combined water the loss of soluble alumina is 1.9 per cent.; with a loss of about 82 per cent. of the combined water there is a much greater loss of soluble alumina, viz., 5.9 per cent., while the loss of soluble alumina rises to 38.60 per cent. when the material is thoroughly calcined. These results would seem to indicate that the material could be calcined until something more than half of its combined water was removed, without seriously affecting the solubility of the alumina, but the practical difficulties in the way of maintaining a uniform calcination at this point would certainly have to be considered. Unless the saving in freight woud more than counterbalance the loss in soluble alumina, there would appear to be no good reason for calcining. The percentage of available alumina (i. e., the alumina dissolved by carrying the treatment with acid to fumes of so-called sulphur trioxide) is decreased by thoroughly calcining the bauxite, but the loss is not serious. In one experiment the "available" alumina in the sample, dried at 100° C., was 57.20 per cent., and in the thoroughly calcined material 56.40 per cent.; in another sample 55.30 per cent. and 54.54 per cent. In one sample the loss was more considerable, the percentages being 54.87 per cent. and 49.50 per cent.

On the whole, we cannot recommend that the analytical sample be calcined previous to treatment with acid, whether by the old or the proposed new method, as a serious loss of dissolved alumina may be the result.

ANALYTICAL METHOD RECOMMENDED.

The analytical sample is to be passed through a sieve of 100 meshes per linear inch.

Moisture—Two grams to constant weight at 100° C.

Available Alumina.—Two grame bauxite, ten cc. cold sulphuric acid of 50° B.

Heat gradually in a casserole until fumes of the so-called sulphuric anhydride appear, stirring the while to break up any small pieces; cover with a watch-glass and heat for ten minutes. Cool, add 100 cc. hot water, and boil for five minutes. Filter and wash free of acid and alum with hot water. Cool filtrate, make up to 200 cc., and take out 50 cc. (equal to five-tenths gram) for alumina, ferric oxide and titanium dioxide, and 50 cc. for titanium dioxide and ferric oxide, TiO_2 and Fe_2O_3.

Estimation of Available Alumina.—The 50 cc. (equal to five-tenths gram) is diluted to 300 cc., 2 cc. hydrochloric acid added, heated to boiling, and ammonia added slowly to slight excess. The contents of the beaker are kept boiling for five minutes, filtered hot, and thoroughly washed with hot water. The precipitate is dried, ignited and weighed as Al_2O_3, Fe_2O_3, TiO_2. The Al_2O_3 is given by subtracting the Fe_2O_3 and TiO_2 obtained in other operations.

Estimation of Titanium Dioxide.—Fifty cc. (equal to five-tenths gram) of the main solution are carefully neutralized with ammonia, the ammonia being added until there is a slight permanent precipitate. This precipitate is dissolced in sulphuric acid, added carefully, so that there shall be but a slight excess; the volume is then made up to 350 to 400 cc. and boiled for one hour. If much iron is present, shown by the color of the main solution, it is best to deoxidize with sulphur dioxide, led into the boiling solution in which the titanium dioxide is being precipitated, but if there is only a small amount of iron present sulphurous acid may be used. In either case, however, it is well to maintain the volume of the boiling soluton at about the same point, by addition of fresh portions of water, and to be sure that it smells of sulphur dioxide during the boiling. By observing these precautions the titanium dioxide is completely precipitated practically free of iron. Filter hot, through double filters, and wash thoroughly with hot water, dry, ignite and weigh as titanium dioxide.

Estimation of Ferric Oxide.—This is best determined in the filtrate from titanium dioxide, by reduction with zinc and titration with permaganate.

The weight of $TiO_2+Fe_2O_3$, subtracted from the weight of $Fe_2O_3+Al_2O_3+TiO_2$, gives the Al_2O_3, and this is the "available alumina."

Estimation of "Free Alumina."—Two grams bauxite, 10 cc. 50° B. sulphuric acid, in a four-ounce Erlenmeyer flask, provided with a perforated stopper. Heat for one hour in a water-bath at a temperature of 95° to 100° C., with frequent shaking. Add 100 cc. hot water and keep in bath for ten minutes. Filter, wash thoroughly with hot water, and for the estimation of alumina proceed as before, with this difference, however, that the titanium dioxide does not have to be determined, since none of it goes into solution. In the solution we have merely the free alumina and a small amount of ferric oxide, which can be estimated in the usual manner, and its weight subtracted from the the weight of the $Al_2O_3+Fe_2O_3$.

Combined Alumina.—The difference between the available alumina and the free alumina is the combined alumina.

We do not wish at this time to give an opinion as to the form in which this alumina exists. It may be as clay, as a lower hydrate, or a mixture of these and other alumina compounds. We have thus far disregarded the insoluble residue, whether from the acid carried to fumes or from the treatment at 100° C.

In case it is desired to determine the total alumina, the total titanic acid, the total ferric oxide and the silica, the insoluble residue from the treatment to fumes may be folded up in the paper and ignited. When the paper is consumed fuse the residue with potassium bisulphate and allow to stand in cold water containing at least 5 per cent. of strong sulphuric acid several hours, or until completely decomposed. Filter off the silica, which should be perfectly white; wash thoroughly with cold water and ignite the silica. In the filtrater the alumina, titanium deoxide and ferric oxide are determined as in the filtrate containing the available alumina. Adding these several amounts to those found in the estimation of the available alumina gives, of course, the totals.

We can not advise the determination of silica in the insoluble residue by treatment with hydrofluoric acid and sulphuric acid, as we have found that some of the titanium deoxide is also volatilized, and the loss is SiO_2+TiO_2.

So far as we are aware, Riley was the first to point out the volatilization of titanium dioxide as fluoride. It may be that some, if not all, of what is volatilized goes off as hydrogen titanofluoride, as Roscoe and Schorlemmer state that when titanium dioxide is dissolved in hydrofluoric acid, a sirupy liquid is obtained which is probably hydrogen titanofluoride, H_2TiF_6. Crookes, in speaking of the estimation of titanium deoxide in silicious residues, says that on treating them with hydrofluoric acid a "titanium fluoride is formed at the same time, which can not be heated without the larger portion going off." He quotes an experiment of Riley's, in which 2.235 grams of titanium dioxide were dissolved in hydrofluoric acid, evaporated and ignited, and the residue weighed only 0.99 gram, a loss of 1.245 grams, or 55.70 per cent. of the original weight.

By seven successive treatments of titanium dioxide with hydrofluoric acid we found the following losses on 0.0000 gram, viz.:

	Per cent.
0.0025	3.57
0.0240	34.28
0.0135	19.29
0.0058	8.29
0.0032	4.57
0.0015	2.14
0.0001	0.14
0.0506	72.28

While there is a gain in time by treating the insoluble residue with hydrofluoric acid and sulphuric acid and taking the loss as silica, and while the error introduced is perhaps of no consequence commercially, yet the fusion with potassium bisulphate is to be preferred. But unless the silica, and the total alumina, titanium dioxide and iron are required, it is not necessary to make a fusion, the data obtained by the two separate treatmnts with acid being in most cases entirely sufficient for the valuation of bauxite.

So far as our observation goes, and we analyzed many different kinds of bauxite, titanium dioxide is always present, and in some bauxite may rise to 4 per cent. The clay immediately next to the bauxite may contain 1 per cent. of titanium dioxide, as we have found eight-tenths per cent. In other clays associated with bauxite we have found mere traces, and in the nearby soils it rarely exceeds five-tenths per cent. The concentration of the titanium deoxide in the bauxite is a very interesting phenomenon, and worthy of more extended investigation.

The titanium deoxide in bauxite is partly soluble in sulphuric acid brought to fumes. By using the Pittsburgh method in bauxite acid analysis, or sulphuric acid alone to fumes, varying amounts of titanium dioxide are dissolved, as the following results show:

Total titanium dioxide.	Soluble titanium dioxide.	Per cent. soluble.
4.00	3.30	82.50
3.00	2.60	93.33
4.00	2.50	62.50

The percentge of soluble titanium dioxide, calculated on the total amount present, may fall as low as 50 per cent., but for the most part appears to be about 75 per cent. No titanium dioxide seems to be dissolved by the acid at 100° C. during one hour, but as the temperature rises the solubility increases, and when brought to fumes considerably more than half is dissolved. The variations in the amount dissolved may be due to variations of the form in which the titanium dioxide is present, but on this point we have no definite information. In summing up the chief points in this paper we desire to call attention to the following:

1. The importance of discriminating in the analysis of bauxite between the trihydrate of alumnia, easily soluble in sulphuric acid, and the other compounds of alumnia, difficultly soluble.
2. A change in the basis of valuation, by which the tryhydrate of alumina is to be given a higher value than the alumina present in some other form.
3. The adoption of a new nomenclature, calling the alumina soluble in 50° B. sulphuric acid at 100° C. during one hour "free alumina," and that soluble in sulphuric acid to fumes "available alumina," the difference between them to be known as "combined alumina."
4. The adoption of a standard method of analysis binding alike on the producer, the broker and the consumer of bauxite for alum-making.—Journal American Chemical Society.

The Production of Glycerine in Soap Making and Its Recovery from Waste Lye.

(Continued from page 16.)

chiefly to their yield of glycerine. We will now consider the manner in which glycerine may be liberated from combination with the animal or vegetable fatty acid.

In the experiment which resulted in the discovery of glycerine, Schule used as a saponifying or liberating agent lead oxide, which substance is used in the pharmacy in the preparation of lead plaster. We have previously briefly considered the saponifying agents employed for the decomposition of the fat in the manufacture of stearic acid and glycerine, viz., superheated steam with either acid or lime.

In the manufacture of soap, however, a saponifying agent is employed which remains in chemical combination with the fatty acids, and constitutes that most indispensable of all popular commodities—soap. The chemical reaction is the same as was explained in the development of the free acidity of fats, with the exception that instead of water, sodium hydrate (NaOH) in aqueous solution, is used. The process of effecting combination between fat and alkali is called saponification, which term is also applicable to a vast number of similar chemical changes in which an acid is produced and an alcoholic form body set free. In the phraseology of the kettle room, "Killing stock" is liberating glycerine from combination in a fat, and introducing the soda of the caustic solution in its place. The saponification of tallow is a process requiring three stages for the complete elimination of the glycerine, and combination of the soda with the fatty acids. While these stages do not admit of exact definition in the soap kettle, they manifest themselves in certain characteristic conditions which are familiar to every soap boiler, viz., the emulsion formed on admixture of soap and lye, the pasty mass obtained on steady boiling, and, lastly, the final condition resulting from boiling the pasty mass with an amount of lye sufficient for complete saponification. By means of chemical formulae, we are able to graphically represent the three successive stages of saponification:

Raw Materials.

Stearine.	Caustic Soda.
$CH_2O(C_{18}H_{35}O)$	
$CHO(C_{18}H_{35}O)$	3 NaOH.
$CH_2O(C_{18}H_{35}O)$	

I.—Emulsion.

CH_2OH	Soap. $C_{18}H_{35}ONaO$.
$CHO(C_{18}H_{35}O)$	Caustic soda
$CH_2O(C_{18}H_{35}O)$	2NaOH

II.—Pasty Mass.

CH_2OH	Soap. $C_{18}H_{35}O.NaO$.
$CHOH$	Caustic Soda
$CH_2O(C_{18}H_{35}O)$	NaOH

III.—Clear Soap.

Glycerine.	Soap.
CH_2OH	$3C_{18}H_{35}O.NaO$.
$CHOH$	
CH_2OH	

On the completion of saponification the contents of the kettle have assumed a clear homogeneous mass in which is present everything that has been added during this stage, viz., soap,

glycerine—both of which have resulted from a simple metathesis—water, some caustic soda in excess, and some salt, sodium, carbonate and sulphate introduced as impurities with the caustic lye, together with whatever mucilaginous matter or animal tissue that may have been present in the stock. If saponification has been complete, there will be no free or unsaponified fat.

The contents of the kettle are now in a condition to "grain," and at this stage in the progress of a "boil" of soap occurs the first actual separation of the glycerine as a dilute and impure aqueous solution called the "stock lye." In the separation of soap from solution, or "graining the soap," as it is called, advantage is taken of the insolubility of soap in strong brine. Salt may be added in solid form, or in aqueous solution, according to a customary practice or the limitations of kettle space. Salt or brine is added until in the judgment of the soap boiler. the soap is completely "grained." Numerous analyses of stock lyes indicate that a soap made of tallow, cotton oil and rosin is sufficiently grained when the content of salt in the stock lye has attained 7-10 per cent. At this stage steam is turned off and contents of kettle are allowed to rest over night; the soap, in virtue of its lower specific gravity, collecting at the top and dropping the impurities of the stock in the under lye. In the process of graining, the soap boiler has separated the contents of kettle into soap and lye, and by introducing the large amount of salt, as will be shown later, he has increased the labor of the glycerine refiner.

From analyses of stock lyes, obtained from a soap of the quality mentioned, extending over a long period of time, we may accept the following analytical data as representative of good, every day, economical practice:

Total alkali. Calculated as NaOH.	Salt.	Glycerine.
Per cent.	Per cent.	Per cent.
00.37	9.10	6.50

The stock lye is now withdrawn, and either pumped to the glycerine refinery or reserved in storage until it is convenient to utilize it. To effect as thorough an initial separation of the soap and glycerine as is possible, it is customary in factories provided with ample facilities for the recovery of glycerine and salt to subject the soap to a "pickle change." The purpose of this change is to wash or leach out the glycerine that tends to remain with the soap. This is effected by boiling the soap with a brine sufficiently strong to maintain the soap in a well-grained condition.

The advisability of this treatment will depend largely upon whether the soap manufacturer operates a glycerine refinery. Excessive freight rates on an unconcentrated lye and the cost of concentrating a lye containing a highly variable quantity of glycerine would doubtless deter a soap maker who sells his lyes to a competitor from introducing this treatment. The following percentages of the essential constituents of a pickle lye are an average of a large number of determinations:

Alkali.	Salt.	Glycerine.
00.26%	9.00%	4.50%

The pickling of the soap is effected on the second day of the boil. After settling over night the pickle lye is withdrawn, and the soap put on the rosin change.

Powdered rosin is put in kettle with the addition of caustic lye and salt, as required. Boiling is continued throughout the day. Caustic lye is added in excess during this change, the soap being kept well open to facilitate the dropping of impurity introduced with the rosin. The soap is again settled over night. An average analysis of the lye withdrawn on the following morning presents some interesting figures, viz.:

Alkali.	Salt.	Glycerine.
6.38%	4.32%	3.30

In addition to the alkali combining with the rosin on this change, the caustic may act as a strengthening lye in effecting the final saponification of the last particles of unkilled stock. The coloring matter of the rosin has imparted a deep brownish-red hue to the lye.

After the withdrawal of the rosin lye steam is turned on. When the soap comes to a boil water is added, and the soap is brought to a proper finish. It is now left to "drop the nigre" and to cool. During this period of about five days' duration there will be ample time for the separation of the nigre. At the expiration of this settling period the pure soap is pumped from the top of the kettle to the crutcher, the removal of the soap being stopped only when the top level of the nigre is reached.

The rosin lye, containing a high percentage of alkali, has been reserved in separate storage until that stage which is the beginning of a new boil. Its strength is exhausted by running it in on the nigre remaining in the kettle and adding grease until all the alkali has entered into combination with it. The whole is then grained, and after settling the final lye is drawn off. This is the nigre lye, and contains all the impurities not retained by the soap and nigre and previously removed in the stock, pickle and rosin lyes. The following is an average percentage of the essential ingredients:

Alkali.	Salt.	Glycerine.
00.33	7.62	5.25

The glycerine in this lye comes almost wholly from the grease added to remove the strength of the rosin lye and nigre.

Although the procedure employed in the manufacture of settled soap is peculiar to each establishment, there is sufficient similarity to admit of statements of general application.

Many soap-makers less zealous than others in the recovery of glycerine withdraw but three lyes from a single boil. The settling periods may vary, and the final separation of the contents of the kettle into soap and nigre is a function of kettle space, quality of product, quantity of the same demanded in a certain time, capital available, etc., etc. When but three lyes are drawn there is a reasonable certainty that all the glycerol available is not separated from this soap, and the distribution of the total glycerol is, of course, different than when four lyes are drawn.

(To be Continued.)

(Special Correspondence to the Reporter.)

Chicago Oil Market.

Chicago, June 23, 1898.

LINSEED OIL.—The market has suffered another decline. Raw oil is quiet at 38@40c., with the inside figures probably nearer the actual selling price. There is not much temptation to cut below this, in view of the fact that most of the independent mills concede that their stocks of oil are running low, and at the same time there is practically no demand outside of calls under contracts. Buyers in general are disposed to be very chary, thinking that the downward course of seed (and particularly the recent sharp break in the flax market) may prove to be symptomatic of lower prices for oil. As yet, Tuesday's "slump" has not affected the quotations for the manufactured product, except to render buyers more cautious. It may, possibly, influence the offerings of futures, but as the National is the only concern at present actively manufacturing and will probably be the only one to carry over any considerable quantity of oil into the coming crop year, it is not likely that there will be any "unseemly scramble" for this class of trade. At present all sellers appear to be maintaining about the same general attitude toward prices, and the face of the situation has so far changed that, outside of its future possibilities, this market may be called not only dull and weak, but rather uninteresting.

FLAXSEED.—The bulletins of the secretary of the Board of Trade for the six days under review include the cargo of over 100,000 bushels which arrived a little more than a week ago, and to which reference was made in my last letter. Taking this element into account, the receipts have been nearly seven times as great as those for the week before and considerably more than double those of the corresponding period in 1897. Receipts by rail since the last writing have been only moderate—much less than a year ago. The secretary's figures also present a beggarly showing of shipments, as compared with those for the preceding week, when there were liberal cargoes taken from store for transmission to Lake Erie ports. A synopsis of the daily postings on 'Change is given below, the table showing some interesting comparisons, which should, however, be read in the light of the foregoing explanation:

(Special Correspondence to the Reporter.)

Week ending	—Receipts.— 1898.	1897.	—Shipments.— 1898.	1897.
June 23.....	152,131	64,970	4,755	4,574
June 16.....	22,200	93,025	80,825	45,582
Increase	129,931	.....	.....	.....
Decrease	.....	28,055	76,070	41,008

The inspection department's posted statements from day to day show fifty-one cars received by rail (as against fifty cars the week before), besides 113,363 bushels by lake. The latter figures include the cargo to which reference has been already made. The fifty-one cars inspected in this were officially graded as follows: Of No. 1 Northwestern, 31; No. 1, 17; rejected, 3. Inspections out have been rather light, even for the season, and very considerably below those for the preceding six days. The respective totals, 31,598 bushels (all of regular No. 1), and 99,942. The aggregate for last week, however, included a large percentage of No. 1 Northwestern.

Stocks in regular Chicago elevators were shown by this week's bulletin of the registrar to have increased 6,668 bushels within a week, the visible supply of No. 1 Northwestern having grown and the quantity of regular No. 1 having been reduced. As was pointed out a week ago, the liberal receipts by lake have been about offset by nearly correspondingly large shipments. For the same week Duluth has officially reported a decrease of 16,006 bushels and Minneapolis a reduction of 10,310 bushels. A year ago Chicago stocks were some 95,000 bushels less; Duluth was carrying 1,000,000 bushels more; and Minneapolis stocks were some 30,000 bushels greater than now. The net result is a decrease of 19,650 bushels in the Northwest for the week, and a showing of 1,057,096 bushels less at the three principal centers of distribution than was in sight one year ago. The appended table affords a condensation, as well as a comparative view, of the official statements, as to the Northwestern visible supply on the respective dates therein mentioned. Only Chicago stocks can be given by grades, but a more detailed statement of the movement at Duluth and Minneapolis may be found in a succeeding paragraph. The table:

	June 20, 1898.	June 13, 1898.	June 21, 1897.
No. 1 N. W.....	201,501	251,523	552,924
No. 1.....	782,590	815,902	262,479
Rejected	37	37	162,885
No grade	2,629	2,629	2,604
Total Chicago...	1,076,757	1,070,097	980,892
Duluth	345,601	361,607	1,469,553
Minneapolis	73,975	84,285	102,984
Total N. W.....	1,496,333	1,515,989	2,553,429

The salient feature for both the cash and speculative markets has been the abrupt and decidedly unexpected break in prices along the entire line. While there has been, for several weeks, a fairly well developed downward tendency, nobody was prepared for a drop of 6½@7c. in a day. It came as precipitately as a summer thundershower, and, while it is easy just now to discover many sagacious prophets who heard the thunder mutter and saw the lightning flash, to the trade at large it was a surprise; there are a few who look upon it as a revelation. Old crop seed has been rather stagnant since the settlement of the May deal, opening a week ago at $1.13 and gradually dropping to $1.11½. Then, without notice, it followed the course of new crop deliveries, breaking to $1.05 in a day, with sales of only one or two cars, and being apparently unable to extricate itself from the net into which it had fallen without special action of its own. A single car of nice, clean, extra choice, however, brought $1.06 yesterday, on track. No. 1 sold at $1.04 yesterday; while rejected—which has met with little demand—sold at 98c., or seven cents under the price paid for a single car day before yesterday. June dropped from $1.14 to $1.05, the latest reported sales being at $1.12, but the nominal closing being at the inside. Among new crop deliveries the interest is still mainly concentrated in September and October. Both have sold freely, and their activity was altogether natural under the circumstances. September opened a week ago at $1.09@1.09½, with October from ¼@1c. lower. Both followed the same general trend, until September touched $1.05½ and October $1.06¼. When the universal wreck occurred, September went off to 99 cents and October to 98. But such a rapid decline inevitably brought out some "long" flax, both by way of realizing and through the execution of stop-loss orders. Then, again, such a break was sufficient in itself to bring in some buyers who sought to realize on early sales, the fluctuations being sufficiently wide to insure a quick, liberal profit. Whatever may have been the reason, however, there were reported sales of some 425,000 bushels of September, and of about 160,000 bushels of October, nearly half the entire volume of business having been negotiated after the commencement of the rapid decline. As to what brought about the drop, there are various theories advanced, some rational and "others otherwise." There are those who are inclined to a rather sensational view, and who are inclined to say that a "deal" undertaken in September seed has fallen through for reasons more or less intimately connected with financial considerations. These people point out that present prices are away under the figures at which September "longs" are supposed to have taken most of their holdings, and they ask what is the present worth of 1,000,000 bushels of cash seed, and about the same quantity bought for September delivery? This view is, however, probably more or less colored by self-interest. That the National has "let go" of September seems self-evident, yet there are palpable operative causes at work to bring about a natural decline of all new crpo deliveries. To begin with, the drop in wheat was sufficient to stimulate growers to plant flax instead of the cereal. It is said here that this idea has found a tangible lodgment in the brain of the late planters of the Northwest, and has resulted in an increased acreage. Then, besides, the Signal Service officers have indirectely aided the bears through their reports of precisely the sort of weather adapted to flax culture, both in Kansas and the Northwest. Senator Cullom once said, in your correspondent's hearing, by way of defending a "billion-dollar Congress," that "this is a billion dollar country." Perhaps—mutatis mutandis—the remark may be applicable in this connection. In the general mix-up at the close 1,000 or 20,000 bushels of year went at 98½c., and it was understood that this was taken in to cover a previous sale at $1.16.

FLAXSEED AT DULUTH.—Receipts continue to be about up to the weekly average, but that is very small. Some twenty or twenty-five cars were inspected in this week, and about 10,000 bushels withdrawn from storage, the net result being a shrinkage of about 16,000 bushels in the visible supply here. Minneapolis received fourteen cars and shipped 27,800 bushels. Very little business is reported at either point, and prices have steadily tended downward. At Duluth cash flax declined from $1.12 to $1.06½, June from $1.11½ to $1.06, and September from $1.09 to $1.03. Apropos of September at Duluth, there seems to be a well defined expectation there that with a falling market exporters will buy freely, in view of the outlook abroad, as regards both supply and price. At Minneapolis cash flax sold down from $1.10 to $1.05, with sellers at the inside at the close. September also showed much weakness, opening at $1.06¼ and closing with $1.02½ bid. It is not thought that there will be any further arrivals of any magnitude at any Northwestern point before the close of August, nor does it seem likely that the exigencies of other markets will result in any serious depletion of stocks at either point in the immediate future.

OIL CAKE.—The dullness which has constituted the salient feature of the market for the past few weeks still continues, and is, if anything, yet more pronounced. There appears to be practically no demand on export account, and the inquiry for domestic consumption is confined to occasional requests for meal in rather small quantities. In this state of affairs the market is rather difficult to quote. The visible supply at this point is mainly controlled by one concern, and in the absence of bids crushers are somewhat disinclined to name a selling price. A few small sales are reported, but on private terms. Exporters claim that a firm offer of $18.50 would be entertained, but I say that these figures are above their views; while, on the other hand, producers seem to expect better returns by holding off. They concede a slight tendency to accumulation, but point out that the current output is by no means large, while the position of the grain market, both a home and abroad, is somewhat in their favor. In a word, "buyers and sellers are apart"; in fact, very widely apart; and the ultimate issue is largely a question of guesswork. As has been intimated, meal is inclined to be slow and heavy, with crushers quoting $20@21 per ton for car lots, and buyers taking just enough to meet consumption needs, which—at this season—are neither large nor pressing.

OLEO OIL.—The Holland market has exhibited a marked increase in activity. Sales at Rotterdam for the period under review are reported to have been some 5,700 tcs., as against 3,800 tcs. the week before and 4,200 a fortnight ago. Nevertheless, the improved demand was not sufficiently brisk to absorb the very liberal arrivals. In consequence, stocks in first hands (although by no means excessive) have more than doubled, being estimated at approximately 2,300 tcs., as against about 1,000 tcs. at the end of the previous week. The Holland churners have bought medium grades more freely than for several weeks past, chiefly at 34@35fl. Extra grades have sold chiefly at 39fl.—or about last week's outside figures—although occasionally 37@38fl. represented the price accepted for certain brands. The export movement has been about unchanged, this week's outward movement being esti-

mated at some 4,800 tcs., as against 4,805 the week before. Rotterdam cables report neutral lard as neglected by churners. For cottonseed oil there is some inquiry, with stocks light and holders not urging sales. No special interest is shown in the local oleo market, although the aggregate of sales is fully equal to the average for the season. While the inquiry can scarcely be called either active or insistent, offerings are not large enough to induce any decided weakness.

LARD OIL.—The past week has been marked by limited inquiry and a generally easy tone; in fact by a reduction of pressers' prices along the entire line, from extra down to No. 2. There appears to be little confidence in the maintenance of present prices for either the raw material or the manufactured product, and buyers are correspondingly cautious in placing orders. The demand is limited to present necessities, and there are small offerings at figures somewhat under the prices quoted by manufacturers. All the better, however, are lower. Pressers are offering extra at 47c., and extra No. 1 at 37c.—a drop of one and three cents, respectively. No. 1 and No. 2 have each fallen off one cent, being quoted to-day at 27c. and 25c. Lower grades, however, are very quiet, and are really worth quoting only in so far as their decline tends to show a sympathetic depreciation of value. The local outlook is not generally regarded as favorable to any sharp, sudden upturn. Offerings are light and sellers not insistent, but away down in the buyer's heart is a lack of faith, which can scarcely fail to make itself felt unless the manipulators of the lard market take a new tack.

LARD.—As compared with the preceding week the market may be said to have been steadier, although the volume of trade has been only fairly large, and no especial strength was developed. Packing throughout the West, as compared with the corresponding week of last year, showed an increase of 15,000 hogs, and lard has been produced rather freely. At the same time, while foreign advices were somewhat more favorable, the export inquiry was light, and there was only a limited demand on shipping account. Offerings, however, were only moderate, and the absence of any urgency to sell had a steadying influence upon prices. The week opened with a rather fair general inquiry and a somewhat firmer feeling, prices ruling about five cents higher. Sellers appeared in large numbers, however, and a recession of 10@12c. quickly followed, although fair buying on the decline brought about a rally of 2½@5c. Then ensued another break—5@7½c.—followed by a rallyy of 5c. and a drop of 5@7½c. under the influence of a reported decline of 3d. abroad. At this point the inquiry decidedly fell off, but cautious tactics on the part of sellers resulted in an advance of 10@12½c., and engendered a rather firmer feeling. It may be seen that fluctuations in market values have been neither so abrupt nor so wide this week as last. Yesterday's market (June 25) showed a fairly active speculative inquiry, but an unsettled feeling. Offerings were moderately free, and the demand was fair. At the opening there was a rather steady feeling, but prices soon fell off 5@7½c. Toward the close there was a slight rally, and at the recovery the closing was about steady. Cash contract lard, after opening at $5.80@5.85, declined to $5.75@5.77½, and within two days thereafter sold down to $5.72½, but reacted to $5.80, and closed yesterday at $5.72½. Tank lard (loose lots) was in fair supply, but only moderate request. A few sales were made on private terms, but generally the ruling price was 30@32½c. under July figures. Leaf has been also quiet, although steady at 5⅝c., which was last wek's closing. The bulk of the week's trading has been in speculative deliveries and of these the interest continues to focus in September, although more or less July lard has been marketed, and there has been a little spasmodic inquiry for the October option. Transfers of July to September are still frequent, and at or about the same rate of difference that prevailed a wee k ago, i. e., at 10@12½c. premium for the later delivery. July opened at $5.82½, advanced 2½c., sold off to $5.72½, reacted to the opening price, and closed at $5.72½. September lard ranged betwen $5.75 and $5.92½, opening at $5.80, and closing at $5.82½. October sold in a small way from 5.97½ down to $5.85, back to $5.92½ and closed at $5.90. There were also limited offerings and a moderate inquiry for December, with sales at $6@6.05. The table given below shows the closing quotations in the Chicago market for cash contract, July and September lard at the close of yesterday's session of the Exchange, as compared with those ruling one week before and on the corresponding date of last year.

	June 22, 1898.	June 15, 1898.	June 23, 1897.
Cash contract	$5.72½	$5.85	$3.65
July	5.72½	5.85	3.67½
September	5.82½	5.97½	3.77½

The following tables, which have been condensed from the daily bulletins posted on 'Change by the Secretary of the Board of Trade, affords a comparative view of the total receipts and shipments of lard at this point for the past week, as compared with that preceding, and for both as contrasted with the same respective periods in 1897; also the total movement at Chicago since the opening of the current packing season as compared with the corresponding eight months of the season of 1896-7. None of this week's shipments has been of tank lard. Of tierces there were 5,347; of barrels, 1,934; and of packages, 24,978. The classification of the season's shipments thus far is as follows: Tierces, 415,495; barrels, 81,354; tanks (pounds), 3,922,968; packages, 2,110,739. The table:

CHICAGO RECEIPTS.

	Pounds.
Week ending June 22, 1898	1,875,121
Corresponding week, 1897	995,515
Week ending June 15, 1898	1,884,518
Corresponding week, 1897	1,319,338
Since Oct. 25, 1897	18,703,735
Same period, 1896-7	38,837,468

CHICAGO SHIPMENTS.

Week ending June 22, 1898	4,375,859
Corresponding week, 1897	9,262,848
Week ending June 15, 1898	2,719,409
Corresponding week, 1897	7,487,497
Since Oct. 25, 1897	341,680,871
Same period, 1896-7	249,096,663

The quantity of lard exported (by ports of destination) is given in the subjoined tabular statement, which covers the past two weeks, and embodies the figures officially promulgated by the Collector of Customs. The figures have reference to pounds. The reduction of exports, it will be observed, is still continuous. Last week it amounted to 1,705,000 pounds; and the week before it was 7,699,000.

With declining markets abroad foreign forwarders naturally wait for concessions in view of a seeming tendency towards a mild accumulation of domestic stocks, but with each decline succeeded by a reaction, they find the problem confronting them full of perplexing questions. The following are the fficial figures:

	June 18.	June 11.
Liverpool	2,381,000	2,357,000
London	805,000	852,000
Glasgow	578,000	40,000
Bristol	.....	160,000
Other English ports	1,385,000	1,400,000
Antwerp	301,000	1,668,000
Germany	1,480,000	3,261,000
Holland	1,184,000	1,200,000
France	112,000	.....
Other Continental ports	1,703,000	500,000
Elsewhere	681,000	877,000
Totals	10,610,000	12,315,000

TALLOW, STEARINE, GREASE, ETC.—Nearly all beef products have exhibited an easy feeling. Offerings have not been excessive, yet they have usually been just a trifle beyond consumptive requirements. While foreign markets were generally reported unchanged, the quiet, easy domestic tone has exerted a strong influence, tallow declining about ⅛@¼c. in sympathy with the rest of the line. The request is rather light, yet there is no particular pressure to sell, and at the decline the market may be called fairly steady. Outside of edible varieties there is little inquiry, perhaps because of the easier feeling in greases, which is noted below. No. 1 packers' closed at 3⅞@4c., which price represents the loss of the entire advance gained during the past three weeks. Closing quotations for other grades were as follows: Packers' No. 1, 3⅝@3½c., with the same range for No. 1 city renderers' and No. 1 country; No. 2 packers', 2¾@3⅛c.; and No. 2 country, 2⅝@3c. On the corresponding date of last year, city tallow was quoted at 3@3½c. and country makes at 2½@3c. There has been only a tame demand for oleo-stearine, and the market is quotably ½@¾c. lower than last week, with a rather drooping tendency. The final reported sales were at 5¼@5⅝c. The market for greases has been dull and easy. Offerings are small, and the demand moderate. Prices, however, remain nominally unchanged, brown being quoted at 2⅝@2½c., yellow at 2⅝@2⅞c., and white at 3⅛@3⅝c. A year ago the entire range was 2@3c.

MICA AXLE GREASE

THE CINCINNATI TRANSFER CO.,

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Mica Axle Grease is very satisfactory in every respect. Quite superior to any axle grease we have ever used before. W. J. Winterbottom, Supt.

We endorse the above.

Griffith & Hill, Lumber Dealers.
Jas. Griffith & Sons, Planing Mill.

Springfield, Vt.

I have a large sale of Mica Axle Grease. It wears three times as long as any I have ever used.
Minor W. Newton.

Eldorado, Wis.

We have sold Mica Axle Grease for five years. It is the best grease manufactured.
C. H. & Buell Anderson.

Detroit, Mich.

I have used Mica Axle Grease for about eight years with the very best satisfaction. It doesn't run off the axle in hot weather; and it doesn't chill and harden in cold weather. I have used almost all other makes of axle grease and consider the Mica worth more than twice as much as any other for my use. J. C. Carpenter, dealer in coal and wood.

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It will cook anything on the most elaborately prepared menu at a fuel cost of **ONE-HALF CENT per HOUR.**

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Exalgine.	Diuretin.	Tartarlithine.
Less than 25 ozs., $1.40 per oz	.....$1.75 per oz.	$7.50 per doz. bottles.
25 oz. lots..... 1.30 "	.....1.65 "	Tartarlithine and Sulphur,
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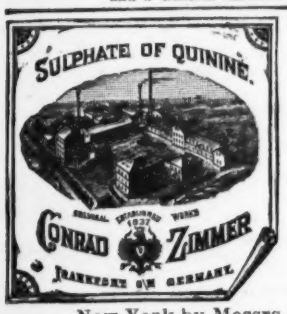

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Pure Cinnamic Aldehyde, absolutely free from Chlorine.

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Glycerine C. P., White
Cubeb Berries, Prime sifted
Phosphoric Acid, Syrupy, Tyrer's
Carbolic Acid, All kinds
Naphthaline, Flaky, Balls & Crystals
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Hypophosphites, Lime, Soda, Potash
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DRUG MARKET.

Note—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.

Complete prices current will be found on pages 35 and 36.

Saturday Evening, June 25, 1898.

The general market has been about as dull during the week just closed as it was for two or three weeks previously, but values appear to have been pretty well maintained, generally speaking, for the reason that they are about at bottom, and dealers have been unwilling to accept lower figures in the face of an absence of demand. Changes in prices have, therefore, been comparatively few.

Advanced.	Declined.
Acid citric.	Formaldehyde.
Citrates,	Isinglass.
English calomel.	Dogwood.
Glycerine.	Gentian.
Japan antimony.	Acid, phosphoric.

Opium.

The market has not changed during the week, which has been a quiet one. The demand from consumers has been light. Dealers continue to ask $3.60 for single cases, and sales of 2 cases were made at this, but $3.55 will buy, and possibly $3.50. Early in the week 30 cases were sold at $3.50. There are buyers of round lots at $3.40, this having been bid for 100 cases and declined. The Smyrna market has been quoted at 10s. 2d. and London 10s. 6d. Jobbing lots have been sold at $3.50, but $3.55 is generally asked, and powdered may be had at $4.45 and upward. At this sales have been made less 1 per cent. and 1 per cent.

Morphine.

The business appears to be confined to deliveries on contracts, but it is possible to shade manufacturers' quotations in bulk quite materially. Lots can be obtained at $1.95@2, and even $1.90 would probably be accepted in a large way. The schedule is: Not less than 25 ozs. bulk, $2.30; oz. vials, $2.35; eighths in 2½ oz. boxes, $2.55; in 1 oz. boxes, $2.60.

Codeine.

Under ordinary circumstances the market would be firm, but competition keeps the price down. In 100 oz. tins dealers are quoting $3.70. Makers quote as follows: Pure, 5 oz. bulk, $3.85; ounces, $3.90; eighths, $4.10; salts, 45c. less all around.

Quinine.

The market has been quiet the whole week, consumers apparently being well supplied, the regular deliveries on contracts being sufficient to meet their requirements. Makers and their agents quote 20@22c., as to brand, and dealers do not quote below the inside price in the absence of business. At the same time 10,000 ozs. could be had at 19½c. In spite of the dullness the market appears steady.

At the auctions held in Amsterdam June 9, 9,112 packages of bark were offered, of which 6,672 packages sold at an average unit for the manufacturing bark of 4.10c. per ½ kilo, against 5.20c. per ½ kilo paid at the auctions on May 5. The American and English agents bought 14,911 kilos; the Auerbach factory 880 kilos, the Brunswick factory 3,535 kilos, the Mannheim and Amsterlam factories 4,315 kilos, Frankfort and stuttgart factories 1,075 kilos, and various other buyers 5,293 kilos. The prices realized for the manufacturing bark ranged from 5.40c. to 5.37c. per ½ kilo. The tone of the market was quiet and easier.

Cinchonidia.

The market continued quiet and 13@13½c. will still buy, as to quantity, although all dealers do not quote as low as this.

Miscellaneous.

ACETANILID.—Makers still ask 29c. in barrels, but dealers will sell at 28½@28¾c., as to quantity, the inside for five barrel lots.

ACID, CITRIC.—Makers advanced their prices 1c. on Tuesday, to 35c. in bbls. and 35½c. in kegs. An advance in the crude material is assigned as the cause. Citrates were also advanced 1c.

ACID, PHOSPHORIC.—Dealers have been cutting prices, and 23@23½c. is now the range, as to quantity.

ALCOHOL.—The market is firm at $2.32@2.36, as to quantity and terms, and dealers report a good demand. There is nothing new regarding the new company.

ANTIMONY.—Whole Japan needle is practically out of the market. Powdered is held firmly at 8c.

BEESWAX.—In the absence of demand the market is a trifle easier, but is not lower, as the offerings are light. Ordinary is held at 30½@31½c., and select at 32@33c., as to holder.

BORAX.—The demand is good, but there are no features worthy of mention. Refiners quote 7@7¼c., as to quantity.

CAFFEINE.—The contract price remains at $4, and while some makers quote a higher price for smaller quantities, $4 will buy.

CALOMEL.—English has been advanced to 95c.

CANTHARIDES.—Chinese continues in light supply and firm at 35@37½c.

CARNAUBA WAX.—The market has been comparatively quiet, and prices remain unchanged, though barely steady.

COCAINE.—Makers report a quiet market at unchanged prices. Dealers will sell 25-oz. tins at $2.75.

COCOA BUTTER.—The market appears steady in the absence of demand. Dealers ask 23@24½c., as to brand and quantity, 24@24½c. being the price for prime Dutch. At the auctions July 5 40 tons will be offered in London and 60@65 tons in Amsterdam.

CODLIVER OIL.—The foreign markets are all higher, based on the results of the catch, Finnarken having been practically finished. It appears that the total yield of oil is about 25 per cent. less than it was last year. There has been heavy buying in the primary markets, several thousand barrels having been taken recently, and the refiners are now asking $1.50 per barrel more than they formerly asked. This makes the import cost for prime brands $25. Some dealers here have raised their price to $25@26, but all quotations are nominal in the absence of demand.

FORMALDEHYDE. — The demand continues active and the market steady at 24@25c., as to quantity, but the supply is quite a liberal one. There may be a change in the situation before long, as the foreign markets are higher by reason of the fact that manufacturers have sold their product over the entire summer.

GLUCOSE.—The Trust is offering 41 degrees glucose and 70 degrees grape sugar at 1.15c. by the carload, for immediate shipment. This has stimulated business, and about 300 barrels of the former have been sold.

GLYCERINE.—Refiners have been obliged to again advance the price of C. P., this time the usual ½c., on account of the steady advance in the price of crude. The demand is light. The revised quotations are 13@13½c. in drums and barrels, packages extra and 14c., as the contract price in cans, up to 16½c., as to quantity. Dynamite is firm at 11½@12½c., as to seller, all of the lots under 11½c. having been purchased.

HARLEM OIL.—This article is being offered for shipment before July 1 at the following prices: Old style, $1.75 per gross, and corked at $2.50, both unstamped. On and after July 1 prices will be: Old style, $1.85 per gross, and corked at $2.65; stamps extra.

HOPS.—On the eve of the new crop the stocks in growers' hands are said to be smaller than for some time. Prime State continue at 11@12c. and Pacific coast at 10@12c.

ISINGLASS.—Heluga is being of-

Schieffelin & Co.

IMPORT & EXPORT DRUGGISTS

Druggists Sundrymen,

MANUFACTURERS OF

Chemical and Pharmaceutical Products

170 and 172 WILLIAM ST.,

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We offer **COCAINE** and **ALOIN** of our own manufacture, also standard chemical and pharmaceutical products. Special quotations will be furnished cheerfully. Orders and correspondence solicited.

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Flour Sulphur,
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Phenacetin, Hemicranin, Salophen, Salicylic Acid;
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Tannigen; Tannopine; Sulfonal; Trional;
Lycetol, Piperazine; Iodothyrine;
Somatose, Lacto-Somatose, Ferro-Somatose;
Alinit, the new bacterial fertilizer, substitute for Saltpetre, Ammoniasalts. *Antinonnin,* Disinfectant Parasiticide, for Brewers, Distillers, etc.

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FLOUR SULPHUR (Sublimed)
250 and 175 Lb. Barrels.

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REFINED SALTPETRE,
Crystals, Granulated and Powdered

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SHELLAC, all grades. VERDIGRIS, Pods, Gran. and Powd.
Nitrate Strontia, Nitrate Barium, CUDBEAR,
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GUM SANDARAC. OXALIC ACID.
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EASTERN HOUSE: 185 Water St., NEW YORK.
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The "Collier" or "Red Seal"

These Popular Brands have a National reputation and are Standard for

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St. Louis Branch, St. Louis, Mo.

THOMAS CARNAR & CO.
Manufacturers of the Finest
French and English **CHAMOIS SKINS**
IN ALL GRADES AND FOR ALL PURPOSES.
181 William St., and 22 Spruce St.
Works at Plainfield, N. J. NEW YORK.

Carried by Wholesale Druggists throughout the United States.
Imported by
The American Trading Company
100 William St, NEW YORK

fered at a shading from former prices, at, say, $2.85@2.90.

JAPAN WAX.—The market remains quiet and unchanged at 7¾c.

KOLA NUTS.—African is being offered at 9@10c.

MENTHOL.—The market is devoid of features of an interesting character. The price remains at $2@2.05, as to quantity.

QUICKSILVER.—The market is firm at 57@57½c., the inside for 5-flask lots.

SILVER, NITRATE.—Silver has advanced, but it has been intimated that no change in nitrate will be made.

SULPHUR. — The market has remained settled, and prices are unchanged.

THYMOL.—Some dealers are asking a higher price, say $1.90. The cost of importation is $1.97½.

VANILLIN.—Domestic is being sold in 100-oz. lots at $1.30, and is jobbed at

26 Degree Aqua Ammonia
Strictly from Sulphate, No Gaseous or Tarry Odor.
IN DRUMS OR CARLOAD LOTS.
COLUMBIA CHEMICAL WORKS,
43-51 Sedgwick St., - BROOKLYN, N. Y.

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KNICKERBOCKER FLAVORING EXTRACTS.
SEWING MACHINE OIL, TOILET WATERS, BAY RUM, ETC.
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MANUFACTURERS OF
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Flint, Green and Amber. Muncie, Ind.

PATERSON, BOARDMAN & CO.
IMPORTERS & GENERAL EAST INDIA MERCHANTS
Nos. 133, 135 & 137 Front St., New York.
Plumbago, Cocoanut Oil, Gum Animi, Gum Kauri, Gum Copal, Gum Damar, Shellac, Saltpetre, Cambier, Pepper, Cloves.

THE following Chemicals are manufactured by ourselves, and we should be pleased to submit samples and prices on application :—

ACID, Oxalic, C. P.
ACID, Salicylic, from Oil of Wintergreen.
ACID, Tannic, Pure.
ALOIN, Yellow.
AMMONIUM, Benzoate.
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AMMONIUM, Citrate.
AMMONIUM, Muriate, Granular, Medicinal.
AMMONIUM, Oxalate, C. P.
AMMONIUM, Salicylate.
APIOL, Fluid Green.
BARIUM, Salicylate.
BERBERINE, Hydrochlorate.
BISMUTH, Citrate.
BISMUTH, Nitrate, Crystal.
BISMUTH, Oxide, Hydrated, C. P.
BISMUTH, Oxychloride, Light
BISMUTH, Oxychloride, Heavy
BISMUTH, Salicylate, Basic, 60 per cent.
BISMUTH, Subbenzoate.
BISMUTH, Subcarbonate.
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BLUE PILL.
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CADMIUM, Bromide.
CADMIUM, Carbonate.
CADMIUM, Iodide.
CADMIUM, Salicylate.
CAFFEINE, Citrated.
CALCIUM, Benzoate.
CALCIUM, Chloride, Hydrated, C. P.
CALCIUM, Salicylate.
CAMPHOR, Monobromated.
CAMPHOR, Monobromated, Powdered.
CITRINE OINTMENT.
CONCENTRATED NITROUS ETHER, 1x21.
ERGOTINE.
ETHER, Acetic.
HYDRASTINE, Alkaloid, White.
HYDROGEN, Peroxide.
IODINE, Resublimed.
IRON, Carbonate, Precipitated
IRON, Carbonate, Saccharated
IRON and Ammonium Citrate.
IRON and Ammonium Tartrate.
IRON and Potash Tartrate, Scales.
IRON and Strychnine Citrate.
IRON, Chloride.
IRON, Citrate, Scale, Ferric.
IRON, Citrate, Soluble.
IRON, Iodide.
IRON, Iodide, Syrup.
IRON, Phosphate, Soluble, Scale, U. S. P.
IRON, Phosphate, Precipitate.
IRON, Pyrophosphate, Soluble, Scale.
IRON and Quinine Citrate, U.S.
IRON and Quinine Citrate, Soluble, U. S. P.
IRON and Strychnine, Citrate.
IRON, Salicylate.
IRON, Subsulphate.
IRON, Sulphate, C. P., Crystal
IRON, Sulphate, C. P., Dried.
IRON, Sulphate, Crystals, Pure.
IRON, Sulphate, Dried and Powdered.
LEAD, Iodide.
LEAD, Tannate.
LITHIUM, Benzoate.
LITHIUM, Bitartrate.
LITHIUM, Bromide.
LITHIUM, Chloride.
LITHIUM, Citrate.
LITHIUM, Iodide.
LITHIUM, Salicylate.
LITHIUM, Tartrate.
MANGANESE, Lactate.
MANGANESE and Iron Lactate.
MAGNESIUM, Salicylate.
MERCURIAL OINTMENT, ½.
MERCURIAL OINTMENT, 1.
MERCURY, Benzoate.
MERCURY, Iodide, Red.
MERCURY, Iodide, Yellow.
MERCURY, Oxide, Yellow.
MERCURY, Redistilled.
MERCURY, Salicylate.
MERCURY, Sulphate, Yellow. (Turpeth Mineral.)
MERCURY, Tannate.
MERCURY, with Chalk.
OPIUM, Denarcotized, Powdered.
OPIUM, Denarcotized, Granular.
OPIUM, Granulated.
PIPERINE.
POTASH, Bichromate, Crystal, C. P.
POTASH, Citrate.
POTASH, Iodide.
POTASH, Salicylate.
SANGUINARINE, Nitrate, Crystal.
SODIUM, Benzoate, Powdered.
SODIUM, Benzoate, Granulated
SODIUM, Bromide, C. P.
SODIUM, Carbonate, C. P., Crystal.
SODIUM, Carbonate, C. P., Dried and Powdered.
SODIUM, Carbonate, Dried and Powdered, Commercial.
SODIUM, Carbonate, Purified, Dried and Powdered.
SODIUM, Citrate, Granular.
SODIUM, Iodide.
SODIUM, Phosphate, C. P., Crystal or Granular.
SODIUM, Phosphate, C. P., Dried and Powdered.
SODIUM, Pyrophosphate.
SODIUM, Salicylate.
SODIUM, Salicylate, from Oil of Wintergreen.
SODIUM, Sulphate, C. P., Dried and Powdered.
SODIUM, Sulphate, C. P., Crystal or Granular.
SODIUM, Sulphite, Recrystallized.
STRONTIUM, Bromide.
STRONTIUM, Carbonate.
STRONTIUM, Iodide.
STRONTIUM, Lactate.
STRONTIUM, Oxalate.
STRONTIUM, Salicylate.
SULPHUR, Washed.
THYMOL, Iodide.
VALLET'S MASS.

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C. G. EULER, W. B. ROBERTSON } General Managers.

$1.40@1.70, as to quantity. Imported is still held firmly at $1.70 in any quantity. The demand is good.

Balsams.

The situation has not changed. The demand is good, but the stock in the hands of the importers is large, hence the market has an easy appearance, although the lots are all held above the views of dealers. Jobbing prices remain unchanged. Peru is being offered by the drum at $2, and up to $2.05 in a jobbing way, although some dealers ask up to $2.30. Tolu is dull at 35@36c., with the large stock still in first hands.

Barks.

Jamaica dogwood is being offered at 5½@6½c., as to quantity. Curacoa orange peel in quarters is obtainable at 3*c. Simaruba is being sold in a jobbing way at 16c., but single bales are obtainable at 13c. Few buyers take a bale, however. Soap to arrive may be had at 5c. Crushed is still quoted at 7@7½c. Wahoo of root is selling at 14@15c., as to quantity. Cascara sagrada is selling well on the spot at 4½@5½c., as to age and quantity. For new crop 3¾c. New York has been bid to holders on the coast, but they declined, and would not entertain a proposition below 4½c.

Beans.

Tonca and vanilla remain quiet, only a jobbing demand being in progress. On the first $1.55@1.60 is the quotation for prime Angostura, as to quantity. Para is active in London, and is advancing. The spot market is quiet, though steady, by reason of the small supply.

Berries.

Cubeb is dull and remains at the prices quoted for several months, viz., 6@8c., as to quality. Juniper is jobbing well at 2⅝@2¾c., at which 100 bgs. have been sold. Coculas indicus is firm at 3¼@3½c., as to quantity. The stock is not large.

Essential Oils.

Anise is now more generally offered at $1.72½, but some dealers decline to shade $1.75. Clove is being offered at 60@65c., as to style of package. Peppermint is dull and featureless. The Messina essences continue to do better abroad, but there has been no change here. Sassafras is still quoted at 31@32c. for natural. Artificial ranges from 28@30c., a bid of 27½c. having been declined. Other oils are dull and featureless.

Flowers.

Arnica continues featureless and unchanged at 6½@7c. The stock of Dalmatian insect flowers at Trieste on June 1 was 220,300 kilos., compared with 293,500 kilos. at the end of April. The receipts at that port in May amounted to 13,400 kilos. (April 25,000 kilos.), and deliveries, 86,600 kilos. (April, 50,000 kilos.). The following are the current quotations: "Open" flowers, 40s. to 42s.; "half-open," 68s. to 80s.; "closed," 95s. to 110s.; and "wild," 118s. to 127s. per cwt. f. o. b. Trieste. Valencia saffron has settled down to $9@9.25 as to quantity. There appears to be no longer a fear that the war will cut off supplies. New crop German chamomile has been offered from the primary market at 26@30c., and reports are to the effect that the crop will be a light one. Here 18@20c. will buy.

Gums.

So-called Barbadoes aloes are being offered at 4@4½c. Cape may be obtained at 5@5½c., as to quantity. Curacao jobs at 2⅞@3c., while socotrine is held at 21@22c. for true, as to quantity. There has been a good demand for chicle, which dealers have filled at 32@34c., as to quantity. In a large way 31c. will buy invoices from importers, but the market is steady. Camphor is seasonably active for all varieties, but prices remain unchanged. Arabic and tragacanth are both selling steadily to consumers, but there have been no changes in prices, and no new features.

Herbs and Leaves.

Buchu was sold at 4½d. in the London auctions on Thursday, for yellowish, and there is a good demand here and a firm market at 10@13c. as to selection. Deer tongue is held at 8@9c. on the spot for the limited quantity available. It is being offered as low as 4c. to arrive, but the outlook is uncertain, though low prices are expected to prevail. Damiana has been reduced to 11@11½c. as to quantity. This change is attributed to the arrival of a lot in San Francisco. The owners ask 14½c., but preferred to offer the goods in New York first. The crop is a short one, and higher prices are expected later. Grindelia robusta is being offered at 6¼c. Cannabis indica is 14c. abroad, but 11@12c. will still buy here. Matico is available at 9@10c. Senna continues in fair demand, and firm.

Roots.

German aconite is being offered at 9½c. Berberis aquifolium may be had at 6c. Colombo can be obtained readily at 10c. Gentian is lower, notwithstanding the higher markets abroad, and 5¼@5½c. will buy. Jamaica ginger is getting scarce, and natural is up to 17@19½c. Bleached remains unchanged at 19@20c. Golden seal is quiet, and for autumn dug root 44@45c. is still asked, but spring dug is available at 40c., and even less from the country. Ipecac is getting scarcer, and dealers have raised their prices to $2.30@2.40, as to quality and quantity, with sales at $2.30. At the London auction on Thursday 9s. was paid. Jalap is quiet at 9½@11c., though the market is steady. Kava kava is not so plentiful, and, while 15c. is asked, 14c. might still buy. Reports from Leghorn state that all of the cheap lots of orris have been bought up, but the market remains unchanged at 9@11c., as to quality. Sarsaparilla and Senega are both quiet, the former at 7½@7¾c., and the latter at 22½@23c.

Seeds.

Canary is a trifle easier, especially for Smyrna, due in a measure to lack of business. Dealers will sell at 2 1-16c. A round lot of La Plata, about 5,000 bags, is being offered in bond at about 1⅞c. Caraway is quiet at 5c. Celery is higher abroad, but 6½c. will still buy here. Hemp is quiet, though steady at 2¾c. Mustard is firm, and in some instances higher, but present prices have cut off the inquiry in some measure. There is practically no Bombay on the spot, and reports from India are in effect that none will come forward this year. In the absence of stock, California Trieste is held nominally at 5½@5¾c. For a lot on the Pacific coast 4½c. was bid, which would make the cost in New York 5c., but the bid was declined, and 4¾c. asked. For Bari brown 25s. has been paid for new. The spot price is 5@5¼c. For new crop Sicily, July shipment, 23s. has been paid, which is equivalent to 5c. here. The spot price is up to 4¾@5c. California yellow has been offered at 4.35c. f. o. b. or 5.10c. New York. The nominal spot quotation is 5@5¼c., but there is little or nothing here. German may be obtained at 3¾@4c., as to quantity, a 100 bag lot being available at the inside. At the same time about 300 bags have been sold in lots at 3⅞@4c. Poppy is quiet and unchanged at 6@6¼c.

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LAVENDER THYME NEROLY
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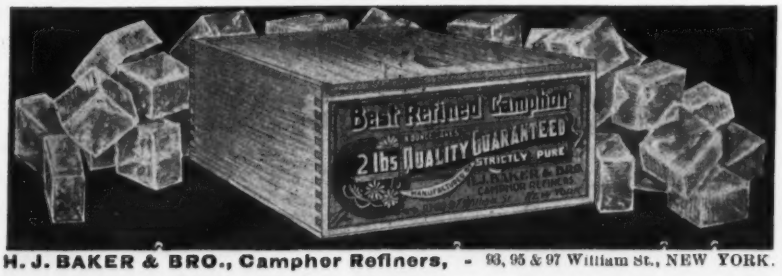

H. J. BAKER & BRO., Camphor Refiners, - 93, 95 & 97 William St., NEW YORK.

Rape dull at 3¼c. for German and 4½c. for English.

Shellac.

The market has been comparatively dull, although a fairly good jobbing business has been in progress at unchanged prices. The Bedouin has arrived with 1,629 cases various marks, DC, Garnet, TN, etc.

Spices.

There has been some inquiry for cassia, and 500 bales China rolls were purchased landing at 8¼c. Of Saigon No. 1 100 cases were sold at 45c., and 150 cases No. 2 at 15½c. Cloves are a trifle lower abroad, but the market is nominally unchanged here at 8@8¼c. There has been some inquiry for black pepper, and 50 tons Singapore were taken at 8⅝c. from store. A lot of 100 bags went at 8¾c., but this was subsequently bid for another lot and declined. Prime pimento is being offered at 9c.

Phosphate Rock Shipments.

Following are the shipments of phosphate rock from the port of Charleston, S. C., during the month of May, 1896, 1897, 1898.

Domestic.	1896. Crude.	1897. Crude.	1898. Crude.
Baltimore	3,251	2,887	2,313
Philadelphia	...	1,427	...
New York	1,411	...	625
Weymouth	1,800	2,839	1,450
Richmond, Va.	...	1,419	1,245
Alexandria, Va.	1,250	...	...
Perryville, Md.	600	...	...
Norfolk, Va.	1,050	...	...
Norfolk, Va.	1,050	...	...
Seaford, Del.	...	600	...
S. C. & G. R. R.	2,366	1,602	*2,539
C. & S. R. R.	...	...	†...
A. C. L. R. R.	...	...	‡...
Totals	11,728	10,774	8,172

*No report from S. C. & G. for May, 1898, only on 16th of June, 1898.
†No report from C. & S., as stated above.
‡No report from A. C. L., as stated above.

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ANALYSES

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CRYSTAL CARBONATE
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SULPHIDE OF SODIUM.

Wholesale Prices Current.

☞Our Quotations are those of Importers and Manufacturers, for original packages and large lots. For broken lots higher prices are asked.

Oils, Etc.

Vegetable Oils.

Linseed, city, raw, in bbls.....per gal.	44 @45
boiled, in bbls.....	46 @47
Out of town on spot.....	40 @42
Calcutta, raw, in bbls.....	— @54
Varnish oil, American.....	— @—
Calcutta.....	55 @60
Cottonseed crude, prime.....	20 @20¼
" " f.o.b. mills....	16 @17
Crude, off quality.....	19 @19½
Yellow summer, prime.....	24 @24½
Yellow summer butter.....	28 @29
Yellow summer, off quality..	23½ @24
White summer.....	28½ @30
Yellow winter.....	31 @32
White winter.....	30 @32
Soap stock.....per lb	5½@ 5¾
Olive.....per gal.	50 @53
Soap stock.....per lb.	4¼@ 4½
Palm, kernel.....	4¾@ 5
Lagos.....	5 @ 5¼
Castor No. 3.....	10¾@11¼
Cocoanut, Ceylon.....	5½@ 5¼
Cochin.....	6½@ 6¾
Corn.....	3 10@3 25
Peanut, white.....	58 @60
yellow.....	50 @55
Rosin, first run.....per gal.	10¼@—
Second run.....	12½@—
Third run.....	14¼@—
Fourth run.....	17 @—
Rapeseed, in bbls., No. 1.....	61 @63
No. 2.....	56 @57
Mustard.....	32 @34

Animal and Fish Oils.

Black fish, crude.....₩ gal.	— @—
Bleached winter.....	— @—
Cod, domestic, prime.....	35 @37
Newfoundland.....	40 @42
Degras, English.....₩ lb	2½@ 2¾
French.....	5 @ 5¼
German.....	2 @ 2½
Herring.....₩ gal.	20 @22
Lard, prime.....	49 @52
Extra No. 1.....	41 @43
No. 1.....	31 @33
No. 2.....	28 @29
Menhaden, prime crude.....	23 @24
Good merchantable.....	20 @22
Brown strained.....	26 @27
Light strained.....	27 @28
Bleached winter.....	31 @32
Extra bleached winter white.	34 @35
Neatsfoot, white.....	60 @62
Extra prime.....	55 @56
Prime.....	50 @52
Extra No. 1.....	46 @48
Dark.....	30 @32
20° cold test.....	75 @80
30° cold test.....	65 @70
Red, Elaine,.....	28 @32
Saponified .....₩ lb.	3½@ 4
Sea elephant, bleached winter....₩ gal.	— @—
Seal, bleached water white.....	— @—
Sod.....	28 @30
Sperm, crude.....	63 @65
Natural spring.....	— @—
Natural winter.....	— @65
Bleached spring.....	— @—
Bleached winter.....	— @70
Tallow, prime.....	43 @45
Dark.....	30 @32
Whale, Crude.....	— @46
Natural winter.....	50 @52
Natural spring.:.....	— @—
Bleached spring.....	— @—
Bleached winter.....	53 @54
Extra bleached winter.....	55 @57

Mineral Oils.

Black reduced, 29 gravity, 25@30 c t....	6½@ 7
29 gravity, 15 cold test...	7½@8
29 gravity, zero.....	9¾@11½
Summer.....	6 @ 6½
Cylinder, light filtered.....	12½@15
Dark filtered.....	10½@15½
Extra cold test.....	20½@24½
Dark steam refined.....	7¾@12½
Natural, Franklin, 32 gravity.....	10 @15
Smith's Ferry, 32@34 gravity..	7½@ 8½
West Virginia, 29 gravity.....	92 @94
Neutral filtered, lemon, 32@34 gravity..	12½@18
White, 32@34 gravity...	20¾@22½
32@34 grav. bloomless..	12½@18
32 grav. wool grade....	10½@14
Paraffine, high viscosity.....	20 @25
903-907 sp. gr.....	8½@ 9
903 sp. gr.....	7½@ 8
885 sp. gr.....	6¼@ 6¾
875 sp. gr.....	6¼@ 6½
865 sp. gr.....	6¼@ 6½
Red paraffine No. 1.....	8¼@ 8¾
No. 2.....	7¾@ 8¼
Spindle No. 1 Filtered.....	15 @16
No. 1.....	12 @13
No. 2.....	11 @12
No. 3.....	10 @11
No. 4.....	9¼@10

Oil Cake, Meal, Etc.

Calcutta cake, city.....₩ ton	— @ —
City domestic.....	20 00@ 21 00
Western, in bags.....	— @20 00
Cottonseed cake at Memphis.....	15 50@15 75
at New Orleans.....	18 50@19 00
at New York.....	21 00@21 50
Cottonseed meal at Memphis.....	16 25@ —
at New Orleans.....	19 50@20 00
Corn Cake.....	16 50@17 00
" " meal.....	— @ —

Wax, Lard, Tallow, Etc.

Paraffine wax, crude.....₩ lb.	2¾@ 3¼
Refined 115 m. p.....	— @ 4¼
120 "	— @ 4¼
125 "	— @ 4½
130 "	— @ 5
135 "	— @ 5½
140 "	10 @11
paraffine, 4s, 6s and 12s.....	6
Candles, Adamantine, 8s, 14 oz.....	6½@ 8
12½oz.....	5¼@—
12s, 16 oz.....	8 @—
14 oz.....	7 @—
12 oz.....	— @ 6
Patent sperm, 4s and 6s.....	38 @40
Sperm, 4s and 6s.....	33 @34
Stearic Acid—plain ends, 4s, 6s, 8s....	9 @—
patent ends, 4s & 6s....	9½@—
cartons, 6lb each.....	9½@10
Lard, spot, tierces.....	5¾@5 90
futures.....	5 62½@5 72½
export pkgs.....	6 25@6 75
compound.....	4½@6 4¾
neutral.....	6 @6½
Oleo stearine.....	5 @5¼
Lard "	6⅝@6¾
Tallow.....	2¼@4
Stearic Acid.....	8 @8½

Naval Stores.

Spirits turpentine.....per gal.	26¾@ 27¼
Rosin, Strained.....per bbl.	— @1 42½
Good strained.....	— @1 45
E.....	1 50 @1 55
F.....	1 65 @1 67½
G.....	1 70 @1 72½
H.....	1 80 @1 82½
I.....	1 85 @1 90
K.....	1 90 @1 95
M.....	2 00 @ —
N.....	2 07½@2 10
Window glass.....	2 15 @2 20
W. W.....	2 25 @2 30
Tar, regulars.....	1 90 @2 00
oil barrels.....	2 55 @2 60
Pitch.....	1 75 @1 80

Paints, Varnishes, Etc.

White Lead, Zincs, Etc.

White lead, American dry.....₩ lb.	4¼@ 4¾
in oil	5¼@ 5¾
English in oil.....	7¼@ 8¼
Litharge, American powdered.....	4¾@ 5
English flake.....	6¾@ 7
Glassmakers'.....	7¼@ 8
Red lead, foreign.....	6¾@ 7
American.....	5¼@ 5¾
Orange mineral, American.....	6¾@ 7
English.....	7¾@ 8¾
French.....	10¾@10¾
German.....	7½@ 8½
China white.....	8 @ 9
Flake white.....	7½@12¼
Cremnitz white.....	14 @18
Zinc white, Paris, G. S., 50 bbls.....8¼ less 4 ₩ ct
G. S., 25 bbls.....8¼ 2 ₩ ct
G. S., 10 bbls.....8¼ 1 ₩ ct
R. S., 50 bbls.....7¼ 4 ₩ ct
R. S., 25 bbls.....7 1 ₩ ct
R. S., 10 bbls.....7 1 ₩ ct
Antwerp, R. S., 50 bbls.6¼ 4 ₩ ct
R. S., 25 bbls.....6¼ 2 ₩ ct
R. S., 10 bbls.....6¼ 1 ₩ ct
G. S., 50 bbls.....7¼ 4 ₩ ct
G. S., 25 bbls.....7 2 ₩ ct
G. S., 10 bbls.....7 1 ₩ ct
G S. in poppy oil.....10¾@11
R. S. in poppy oil.....	9¾@ 9¾
French in varnish.....	16 @17
American extra, dry.....	3¾@ 4¼
Florence	5 @ 6
German.....	5½@ 6¼

DryColors.

REDS.

Carmine, No. 40.....₩ lb.	2 50 @3 60
Crocus martus, imported.....	2¾@ 3¼
standard Am'can...	1 @ 2¼
Indian red, standard American.....	3 @ 3¼
English.....	4½@ 8½
Rose pink, American.....	8 @ 9½
English.....	7½@ 9
Tuscan red, English.....	7 @ 10
Turkey red, English.....	7½@ 10
Venetian red, English, prime.....	1 50 @1 75
2d quality...1	00 @1 25
American.....	60 @ 90
Vermilion, imported English.....	70 @ 90
Am. quicksilver, bulk...	65 @ 66
bags...	66 @ 67
Chinese.....	80 @ 90
American.....	14 @ 16
Artificial.....	12 @ 20

BLACKS.

Carbon.....	3 @40
Drop, American.....	2½@ 4
English.....	5 @10
Ivory.....	9 @20
Lamp, commercial.....	3 @ 5
refined.....	8 @10
calcined.....	12 @20
fine spirit.....	20 @35

BLUES.

Celestial.....	5½@ 8
Chinese.....	25 @35
Prussian.....	22 @30
Prussian Foreign.....	23 @30
Refiners'.....	60 @70
Soluble.....	23 @35
Ultramarine.....	7 @25
Verditer.....	25 @30

BROWNS.

Sienna, Italian, burnt & powdered.....	2½@ 3½
burnt lumps.....₩ lb.	1½@ 2
raw, powdered.....	2½@ 2¾
raw, lumps.....	1½@ 2
American burnt and powdered.	1¼@ 1½
raw.....	1½@ 1¾
Spanish brown.....	1 @ 1
Umber, Turkey, burnt & powdered.....	2½@ 3½
burnt lumps.....	3½@ 4
raw and powdered....	2½@ 3
raw, lumps.....	2½@ 2¾
American, burnt	1½@ 1½
raw	1½@ 1½
Vandyke brown, German.....	2½@ 3
American.....	1¾@ 2½

GREENS.

Chrome, chemically pure.....	— @28
extra	14½@15
super	10 @12
Chrome, common.....	5 @ 6
Paris, pure.....	14½@21½
in pulp.....	— @—
Verdigris, French.....	16 @20

YELLOWS.

Chrome.....	10 @25
Ocher, Rochelle.....	1 10@1 20
washed Dutch.....	4½@ 5
French.....	1 @ 1¾
golden.....	2¼ @ 4
domestic.....₩ ton.....	8 8 00@15 00

Miscellaneous.

Barytes, prime white.....₩ ton.	12 00 @15 00
foreign floated.....	19 50 @21 00
domestic floated.....	12 50 @18 00
off color.....	9 00 @10 00
Crude, No. 1.....	9 00 @10 00
No. 2.....	8 00 @ 8 25
No. 3.....	7 75 @ 8 00
Blanc fixe.....₩ lb	2¼@ 2¾
Bronze powder.....	45 @ 2 50
Brocades.....	45 @ 1 00
Chalk.....₩ ton.	2 00 @ 2 10
Clay, China, imported.....₩ ton.	10 00 @17 00
domestic.....	8 00 @10 00
Cobalt oxide.....₩ lb.	1 60 @ 1 70
Feldspar.....₩ ton.	12 50 @16 00
Fullers Earth lump.....	75 @ 90
Powd.....	82½@ 90
Marble dust.....₩ bbl.	75 @ 1 00
Manganese Car lots.....	15 00 @17 00
Jobbing.....	3 @ 5
Magnesite, raw.....	7 00 @ 8 00
ground.....	1¾@ 1¾
Plaster.....	@ 1 40
dentists'.....	5 @ 2 00
Pumice stone, orig'al cks....₩ lb.	2 @ 2¼
selected lumps in bbls....	5 @ 12
powdered pure, in bbls....	2 @ 2¼
Putty, in bulk.....	1 45 @ 1 75
bladders.....	1 65 @ 2
tins.....	2 @ 2¼
Rottenstone, originally.....	6 @ 7½
Selected, lumps....	5½@ 12
powdered, in bbls...	3½@ 3¾
Silex.....per ton.	18 00 @20 00
Smalt, German blue.....per lb.	15 @ 16
super black.....	— @ —
Talc, American.....per 100 lbs.	50 @ 65
French.....	75 @ 1 25
Terra alba, American No. 2.....	50 @ 60
English.....	85 @ 1 00
French.....	80 @ 1 00
Whiting, commercial.....	35 @ 40
Gliders'.....	45 @ 50
extra gliders'.....	55 @ 60
American, Paris.....	65 @ 70
English cliffstone.....	75 @ 1 20

Glues.

Extra white.....per lb.	15 @25
Medium white.....	10 @15
Cabinet.....	11 @15
Low grade.....	7 @ 9
Foot stock, white.....	8 @15
brown.....	7 @12
Irish.....	10½@12½
French.....	9 @24
German hides.....	13 @16
common...	9 @12

Varnish Gums.

Asphaltum, Cuban prime.....per lb.	4 @ 6
Egyptian.....	5 @ 6
Copal, Sierra Leone cleaned.....	50 @65
Zanzibar, bold white.....	70 @80
medium white.....	55 @65
bean and pea.....	30 @40
Manila, pale.....	30 @35
bright amber.....	15 @18
standard.....	9 @11
Damar, Batavia.....	16½@17
Singapore.....	8½@12
Kauri, standard.....	— @30
No. 2.....	19 @20
hard scraped.....	30 @32
light hard scraped.....	40 @45
picture quality.....	— @60
pale and fine selected.....	— @50
Sandarac.....	— @18

Window Glass.

AMERICAN LIST.

Single.

United inches.	Sizes.	Prices per Fifty feet. AA	A	B	C
25	6x 8 to 10x15	$17 50	$16 25	$15 50	$18 00
34	11x14 to 14x20	20 00	18 50	17 25	16 50
40	12x13 to 16x24	22 00	20 00	18 50	17 75
50	18x22 to 20x30	25 00	23 00	21 00	....
54	15x36 to 24x30	27 00	24 50	22 00	....
60	20x28 to 24x36	30 00	26 75	24 00	....
70	26x34 to 28x32 to 30x40	33 50	30 50	27 00	....
80	30x30 to 32x38 to 30x50	40 00	36 50	32 00	....
84	34x36 to 30x54	41 25	37 50	33 75	....

Double.

United inches.	Sizes.	Prices per 50 ft. AA D	A D	B D
25	6x 8 to 10x15	$23 50	$22 00	$21 00
34	11x14 to 14x20	28 50	26 25	24 50
	12x13 to 14x20	28 50	26 25	24 50
40	10x26 to 16x24	31 25	28 50	26 25
50	18x22 to 20x30	34 50	31 75	28 75
	20x29 to 20x30	34 50	31 75	28 75
54	15x36 to 24x30	36 50	33 75	30 50
60	20x28 to 24x36	41 00	37 25	33 75
70	26x34 to 30x40	47 00	42 75	38 00
	28x32 to 30x40	47 00	42 75	38 00
	30x30 to 30x40	47 00	42 75	38 00
80	32x38 to 30x50	55 00	50 50	45 50
	34x36 to 30x50	55 00	50 50	45 50
84	30x52 to 30x54	57 00	51 75	46 50
90	30x56 to 24x58	59 50	54 00	48 50
94	34x58 to 24x60	63 00	57 50	52 00
100	36x60 to 40x70	66 50	60 50	55 00

Sizes above 50 inches $10.00 per box extra for every 5 inches. An additional 10 per cent. will be charged for all glass more than 40 inches wide. All sizes over 52 inches in length, and not making more than 81 united inches, will be charged in the 84 united inches bracket.
Discount, 85.

Metallic Paints.

Brown.....	18 00 @20 00
Red.....	18 00 @20 00

Colors in Oil.

Black Japan.....per lb.	13½@20
in oil.....	12 @13
drop, ...	7½@10
lampblack, prime.....	27 @33
medium.....	15 @20
2d quality.....	13 @19
low grade.	8½@10
Blue, Chinese.....	35 @40
Prussian.....	20 @40
ultramarine.....	12 @15
Brown, sienna, burnt.....	7 @10
raw.....	7 @10
umber, burnt.....	@10
raw.....	7 @10
Vandyke.....	7 @11
Green, chrome.....	8 @14
Paris.....	16 @18½
Red, Indian.....	12 @15
Ventian.....	4½@ 8
Yellow, Chrome.....	13 @18
Ocher, French.....	4½@

Drugs.

Opium.

Opium, natural (cases).....₩ lb.	3 50 @3 60
as wanted.....	3 55 @3 60
powdered.....	4 45 @ —

Morphine.

Morphine, bulk.....₩ oz.	1 90 @2 30
oz. vials.....	2 15 @2 35
⅛ oz vials, 2¼ oz. boxes,	— @2 55
⅛ oz vials, 1 oz. boxes,	2 50 @2 60

Codeine.

Codeine, Pure, bulk, 5 oz.....₩ oz.	3 70 @3 85
—	@3 90
eighths.....	— @4 10
Salts, all sizes less than pure	— @ 45

Quinine.

Quinine, 100 oz. tins.....₩ oz.	19½@ 22
50 oz. tins.....	20½@22½
25 oz. tins.....	21 @23
5 oz. tins.....	22 @24
1 oz. tins.....	25 @27
1 oz. vials.....	27 @29
Cinchonidia, bulk.....	13 @13½

Miscellaneous.

Acetanilid, in barrels.....₩ lb.	28½@ 29
Acid, benzoic, true.....₩ oz.	6¼@ 6½
ex. toluol....₩ lb.	47 @ 48
boracic, crystals, city.....	9¼@ 9¾
Calif....	@ —
powdered, city.....	10 @ 10
Calif	— @ 10
carbolic, drums.....	— @ 16
bottles	22 @ 23
tins.	18 @ 20
citric, barrels.....	— @ 85
kegs.....	— @ 85½
pyrogallic	— @ 2 15
salicylic.....	40 @ 42
Alcohol, 94%, ...₩ gal.	2 32 @ 2 36
ref. wood, 95%.....	— @ 75
97%.....	— @ 80
purified.....	1 20 @ 1 50
Almond oil, sweet, almonds.₩ lb.	32 @ 35
peach kernels.....	19 @ 20
Alsin.....	35 @ —
Ambergris, black.....₩ oz.	15 00 @17 50
grey.....	21 50 @26 50
Ammonia, carb, domestic....₩ lb.	7¼@ 7¾
foreign.....	7¼@ 7¾
Antimony, Japan needle.....	— @ —
Areca Nuts.....	— @ 8
Arrowroot, Bermuda.....	— @ 40
St. Vincent, bbls.....	6¾@ 7
cans.....	7¾@ —
Balm of Gilead Buds.....	28 @ 30
Barium chloride.....	2½@ 3¼
chlorate.....	— @ 28
nitrate.....	6 @ 6½
Barbadoes tar, in bbls.....₩ gal.	— @ 30
Bay rum, bbls.....	— @ 2 20
Beeswax, white, pure.....₩ lb.	45 @ 50
yellow.....	30½@ 32
Bismuth, citrate.....	— @ 1 60
subcarbonate.....	1 25 @ 1 30
subgallate.....	1 15 @ 1 25
subnitrate.....	1 10 @ 1 15
Blue Pill	35 @ 38
Borax.....	7 @ 7¼
in bags.....	6¾@ —
powdered.....	7 @ 7¼
Bromine, bulk.....	45 @ 50
Burgundy pitch.....	4¾@ 5¼
Caffeine.....	4 00 @ —
Calomel, American.....	69 @ 71
English.....	— @ 95
Cantharides, Chinese.....	35 @ 37½
powdered.....	— @ 40
Russian.....	45 @ 47
powdered.....	50 @ 52
Carnauba wax No. 1.....	16½@ 17
No. 2.....	11 @ 12
No. 3.....	8½@ 9
Castor oil, city, bbls.....	12 @ 12½
cases.....	12½@ 13
Castile soap, white, pure.....	9½@ 10
Marseilles	6½@ 7
green, pure.....	7½@ 7½
ordinary.....	6 @ 6
mottled, pure.....	5½@ 5¾
ordinary.....	4½@ 4½
Chalk, precip.....	4 @ 6
Chloral hydrate, crusts, 25 lb. jars	80 @ 85
crystals, 25 lb. j s	85 @ 90
Cochineal, yellow.....	10 @ 11
white.....	11 @ 13½
Chloroform.....	47 @ 50
Clover Tops, red.....	7 @
Cocaine muri, bulk.....₩ oz.	2 70 @ 2 90
oz vials.....	2 75 @ 3 00
Cocoa butter, 12 lb. boxes....₩ lb	29 @ 31
bulk.....	

Cod liver oil, Newfoundland	℔ gal.	30	70
Norwegian	℔bbl.	24 00	@25 00
Colocynth apples, Spanish	℔ lb	12	20
Trieste		34	40
Corrosive sublimate		79	81
Coumarin, refined		7 00	7 25
Cuttlefish, Trieste		3½	7½
Cologne spirit	190° ℔ gal.	21	24½ 1 25½
Dragon's blood, mass	℔ lb.	18	35
reeds		—	45
Epsom salts, per 100 lbs		95	1 00
Ergot, German		17½	18
Russian		17	17½
Spanish		22	24
Ether, 1860		—	57
Washed		—	61
1890		—	63
Eucalyptol		—	@ 1 50
Formaldehyde		24	25
Fusel oil	℔ gal	55	65
Gelatine Silver	℔ lb.	28	29
Gold		24	45
Glucose 41°		1 15	1 25
Glycerine, C. P. drums		13	13½
C.P. bbls		13	13½
C.P cans		14	15
Dynamite		11½	12¾
Grape sugar 70°		1 15	1 25
Guarana		35	40
Harlem oil, old style		—	1 75
New style		—	2 50
Hypophosphite, lime		1 02½	1 10
potash		1 02½	1 10
soda		1 02½	1 10
Iceland moss		5	—
Insect powder		16	18
Iodine, re-sublimed		2 00	3 05
Iodoform		3 10	3 15
Irish moss, ordinary		7	8
bleached		10	11
Isinglass, Russian, bleached		2 85	2 90
unbleached		2 75	2 80
American		—	50
Japan wax		—	7¾
Kola Nuts, African		9	10
Licorice, mass, Greek		8	12
Spanish		17	24
stick, domestic		15½	23½
foreign		23	25
Lithia, carb		3 30	3 50
Lupulin		18	25
Lycopodium		29	30
Manna, large flake		45	50
small flake		21	22
sorts		15	19
Menthol		2 00	2 05
Myrbane oil		9	10
Musk, pods, Cab	℔ oz.	4 00	6 00
Nepaul		21 00	@22 00
Tonquin		12 00	@21 00
grain Cab		7 50	8 50
Canton, extra		—	1 00
good		18	20
Nepaul		18 00	@19 00
Tonquin		19 00	@20 00
druggists'		17 00	@18 00
Mustard oil		30	32
Naphthaline, ball	℔ lb	2½	2⅝
crystals		2½	2⅝
flakes		2½	2⅝
Nux vomica		2	2¼
Phosphorus	℔ lb.	40	90
Pilocarpine	℔ oz	—	7 00
Poppy Heads	℔ lb.	—	12
Precipitate, red	℔ lb	79	81
white		84	86
Potash Perman		17	18
Potassium, bromide, bulk		44	45
cyanide "		29	31
iodide "		2 35	2 40
Quicksilver		57	57½
Rochelle salts		18	18½
Salicine, bulk		2 50	2 55
Salol, bulk		—	—
1 lb bots		3 10	3 50
½ lb bots		3 15	3 55
¼ lb bots		3 25	3 65
ounces		25	30
Santonine		2 40	2 50
Seidlitz mixture		14½	15
Sesame oil	℔ gal.	62	65
Silver nitrate	℔ oz.	40	41½
Spermaceti, blocks	℔ lb.	—	28
cakes		—	29
Strontia, nitrate		8	9
St. John's bread		—	2½
Sugar of milk, cob		—	16
powdered		10	12
Sulphur, roll		2½	2¾
flour		2 40	3
Strychnine, bulk	℔ oz.	60	70
Tamarinds	℔ keg.	2 25	2 50
Thymol	℔ lb.	—	1 90
Vanillin	oz	1 30	1 70
Venice turpentine	℔ lb.	14	18
Zinc chloride, gran		6¾	—
sulphate		2½	2¾

Balsams.

Copaiba—Central American		42½	43
Para		48	50
Solidifiable		55	—
Fir—Canada	℔ gal	1 80	1 85
Oregon		55	70
Gurjun	℔ lb	10	15
Peru		2 00	2 05
Tolu		35	36

Barks.

Angostura	℔ lb	6½	7
Bayberry		3½	3½
Black Haw, of root, true		7	7½
of tree		4½	5
Buckthorn		—	5
Cascara sagrada		4½	5
Cascarilla		7	7½
Canella		—	5
Cinchona—Red, quills		18	22
broken		15	18
Yellow, quills		10	26
broken		18	22
Condorango		—	12
Coto		—	12
Cramp		5½	6
Dogwood, Jamaica		5½	6½
Elm, common		—	9
select		10½	11
Mesereon		9	10
Oak, red		3	4
White		3	4
Orange peel—bitter, Curacoa, quarters		—	3½
sweet, Malaga, pieces		—	8
quarters		—	10
sweet, Trieste		—	5½
Prickly ash		—	2
Pomegranate of fruit		8	10
root		12	13
Quebracho		—	10
Sassafras		5	6½
Simaruba		13	16
Soap, white		—	5
crushed		7	7½
Wahoo, of root		14	15
of tree		14	15
White Pine		—	4
White Poplar		—	4
Wild Cherry		4	6
Witch Hazel		2½	3

Beans.

Calabar	℔ lb.	—	8
St. Ignatius		16	20
Tonka—Angostura		1 55	1 60
Para		—	18
Surinam		42½	45
Vanilla—Mexican, whole		8 50	14 00
cuts		8 00	8 25
Bourbon, whole		4 00	8 00
Tahiti, whole		2 15	2 25

Berries.

Cubeb	℔ lb.	6	8
Fish (Cocculus Indicus)		3½	3½
Juniper		2½	2¾
Laurel		—	4
Prickly ash		—	10
Saw Palmetto		8	10

Essential Oils.

Almond—bitter	℔ lb	4 00	6 00
artificial		75	1 00
Amber—crude		14	15
rectified		—	23
Anise		1 72½	1 75
Bay		2 50	2 75
Bergamot		1 85	2 00
Birch, sweet		—	1 00
Birch Tar, crude		—	18
extra		—	30
Cade		15	25
Cajeput		55	57½
Camphor		6	8
Caraway seed		1 10	1 15
twice rectified		1 30	1 40
Cassia		95	1 15
Cedar leaf		35	40
wood light		—	25
Florida		—	25
rect		—	25
Cinnamon, Ceylon, heavy		8 00	9 00
Citronella		26	30
Cloves		60	65
Copaiba		80	85
Coriander		8 50	11 00
Crotcn		1 20	1 30
Cubeb		75	—
Cummin		3 00	—
Erigeron		60	65
Eucalyptus, American		45	60
Australian		—	75
Fennel seed		—	1 25
Geranium rose, African		—	5 75
East Indian		—	2 00
French		—	11 00
Ginger		—	4 50
Hemlock		33	35
Juniper berries—rectified		—	70
twice rectified		—	1 20
wood		25	30
Lavender, French		1 20	1 65
garden		35	55
spike		75	90
Lemon		80	95
Lemongrass, native		1 10	1 15
Linaloe		—	1 50
Mace		—	1 15
Malefern		1 75	—
Mustard—natural		—	6 00
artificial		3 15	3 75
Neroli—petale		—	25 00
bigarade		20 00	24 00
Nutmeg		1 25	1 40
Orange, bitter		2 75	3 00
sweet		1 75	2 05
Origanum		17	32
Patchouly—leaf		—	5 00
cultivated		—	6 00
Peppermint—tins		85	95
bottles		—	1 15
Pennyroyal		70	75
Petit grains, French		4 00	4 25
Pimento		2 00	2 25
Rhodium		2 00	7 00
Rose	℔ oz.	5 37½	6 60
Rosemary flowers, French	℔ lb.	70	85
Trieste		—	50
Sandalwood—East India		3 50	4 00
West India		1 75	2 00
Australian		—	3 00
Sassafras—natural		—	31
artificial		28	30
Saffrol		—	36
Savin		90	1 37
Spearmint		1 00	1 10
Spruce		28	30
Tansy		1 00	1 10
Thyme—red, French		80	85
white, French		1 00	1 05
Wintergreen—natural		1 00	—
artificial		50	52½
Wormseed—Baltimore		3 00	—
Wormwood, pure		2 50	2 75
Ylang ylang		45 00	68 00

Flowers.

Arnica		5½	7
Calendula, foreign		60	70
Chamomile, Belgian		10	12
German		18	20
Insect		13	15
Lavender, ordinary		—	3
select		8	12
Poppy, red		—	35
Rosemary		—	15
Saffron, American		12	—
Alicante		—	5 00
Valencia		9 00	9 25

Gums.

Aloes, Barbadoes	℔ lb.	4	4½
Cape		5	5½
Curacoa		2¾	3
Socotrine		21	22
Ammoniac		20	22
Arabics, Firsts		53	55
Seconds		33	36
Thirds		27	28
Fourths		22	24
Siftings		—	15
Sorts		17	17½
Asafœtida		15	17
Benzoin		23	33
Camphor, American bbls		—	34½
cases		—	35
ounces		36	37
English		—	26
Japan		34½	37
Chicle		31	33
Euphorbium		15	—
Galbanum		70	75
Gamboge		35	37
Gualac		11	15
Kino		2 00	2 10
Mastic		43	44
Myrrh		15	18
Olibanum, siftings		4	4½
sorts		5½	—
tears		8½	9
Sandarac		17½	—
Scammony, resin		2 50	2 75
Aleppo		2 75	2 90
Virgin		4 00	6 50
Senegal, picked		18	24
sorts		13	14
Tragacanth, Aleppo, Firsts		50	53
Seconds		50	55
Thirds		35	45
Fourths		32	35
Turkey, Firsts		55	55
Seconds		50	60
Thirds		45	50

Herbs and Leaves.

Aconite	℔ lb.	9	10
Althea		—	10
Belladonna		10	12
Buchu, short		10	13
long		16	18
Coca, Huanuco		—	17
Truxillo		12	13
Coltsfoot		—	7
Conium		—	7
Deer Tongue		8	9
Damiana		11	11½
Digitalis		10	11
Doggrass		7	7½
Eucalyptus		3½	4
Grindelia robusta		6½	—
Henbane (hyosciamus)		8	9
Horehound		5	6
Indian hemp (Cannabis Indica)		11	12
Jaborandi		7½	11
Laurel		4	5
Lobelia		—	5½
Matico		9	10
Marjoram, German		8	12
French		9½	12
Pennyroyal		—	3½
Peppermint, American		—	7
German		—	25
Pichi, tops		15	20
Pulsatilla		—	—
Prince's pine		—	—
Rose, red		40	45
pale		11	12
Rosemary		—	4
Rue		—	16
Sage, Italian picked		—	8
Savory		5	6¼
Scullcap		10	11
Squaw Vine		7	8
Senna, Alex. garbled and sifted		15	25
siftings		6½	7
Tinnevelly		7	15
Stramonium		5	6¼
Thyme		—	6¼
Uva Ursi		4½	5
Witch Hazel		—	4
Wormwood, foreign		—	8
Yerba Santa		5½	6

Roots.

Aconite, German	℔ lb.	—	9¼
Alkanet		5½	5¾
Althea, whole		8½	9
cut		—	16
Angelica, German		14	15
American		7	8
Arnica		10	12
Belladonna, Atropia		—	12
Scopalia		—	10
Berberis Aquifolium		—	6
Bitter		—	11
Blood		6	7
Blueflag		—	7
Bryonia		—	9
Burdock		8	8½
Calamus, bleached		28	35
unbleached		—	7
Cohosh, black		3	4
blue		—	4
Colchicum		7	8
Colombo		—	10
Culvers		8½	9
Dandelion, German		—	10½
Elecampane		4½	5
Galangal		—	6
Gelsemium		—	4½
Gentian		5¼	5½
Ginseng, Southern	℔	25	2 50
Northern		—	2 25
Northwestern		—	2 80
Ginger, Jamaica, unbleached		17	19½
bleached		19	20
Golden seal		—	40
Hellebore, white		—	—
American		—	—
black		—	6
powdered		12	14
Hydrangea		—	5
Ipecac Rio		2 30	2 40
Jalap		9½	11
Kava Kava		14	15
Lady slipper		—	17
Licorice, ordinary bdls		4	—
selected, bdls		7½	10
Lovage, American		—	22
German		—	9
Mandrake		4	4½
Musk, Russian		—	12
Orris, Florentine		9	11
Verona		—	6¼
fingers		65	70
Pareira brava		—	5
Pellitory		15	16
Pink		18	18½
Pleurisy		—	9
Poke		—	3½
Rhatany		10	12
Rhubarb, Canton		20	50
Shensi		40	70
High dried		25	40
clippings		22	25
Sarsaparilla Honduras		20	25
Mexican		7½	7¾
Senega, Southern		—	30
Western		22½	23
Skunk Cabbage		—	8
Snake, Canada		—	13
Texas		20	21
Virginia		—	31
Stillingia		—	3½
Stone		—	4
Squills		3½	5
Unicorn, false		23	25
true		—	18
Valerian, German		—	9
Belgian		5	6
English		25	28
Wild Yam		5½	6
Yellow dock		—	5
Zedoary		7	8

Seeds.

Anise, Italian, sifted	℔ lb	6	6½
Russian		—	4¾
star		—	25
Canary Sicily		—	2¼
Smyrna		—	2 1-16
La Plata		—	—
Caraway, Dutch		—	5
Cardamoms, Bleached		85	1 15
Decorticated		90	95
Celery		—	6½
Colchicum, German		10	11
Conium		6	7
Coriander, Natural		—	2
bleached		—	2½
Cummin, Malta		1¾	2
Fennel, German		—	9
Italian		4½	5
Flax	℔ bbl.	2	2 20
ground	℔ lb	2½	3
Fenugreek		—	3½
Guinea grains		6½	7
Hemp, Russian		—	2¾
Larkspur		38	—
Lobelia		22	25
Millet		—	1½
Mustard, brown, Bari		5	5¼
Bombay		—	—
Cal		1½	5¾
Sicily		4½	5
Trieste		—	7
yellow, Cal		5	5¼
German		3½	4
Poppy, blue		6	6¼
Quince, German		35	40
Rape, English		—	4¼
German		—	3½
Sabadilla		—	12
Stavesacre		—	15
Stramonium		—	7
Strophanthus		30	90
Sunflower		3½	4½
Worm, Levant		—	8½
American		—	5

Shellac.

D. C	℔ lb.	25	27
V. S. O		—	23
Triangle G		—	22
S. S		—	21
S. D		—	22
T. N		16	17
Garnet, A. C		—	18
Button		20	24
Bleached		16	17

Spices.

Cassia, Batavia, No. 1	℔ lb.	16½	18
broken		13	15
Canton, matted rolls		8½	8¾
broken		6	7½
Saigon, rolls		46	50
broken		34½	36
Buds		21½	25
Cloves, Amboyna		10¾	12
Zanzibar		8	8¼
stems		—	4½
Ginger, African		4½	5
Calcutta		4½	5
Cochin, A. B. C		6¼	6¾
D		5	5½
Mace, Banda		45	48
Batavia		33½	38
Penang		43	45
Nutmegs, 110's		33	34
Pepper, black Acheen		8½	8½
Singapore		8¾	9
West Coast Sumatra		8½	8¾
white, Penang		14½	14¾
Singapore		16¾	17
red, capsicums		7½	8½
Zanzibar		11	12
Pimento, Jamaica, prime		—	9

Chemicals.

Heavy Chemicals.

Alkali, 48 ℔ cent., Solvay		65	75
ammonia, high test		50	65
Bleach, over 35 ℔ cent		1 50	1 75
Salt cake		50	55
Soda ash, carb. 48 ℔ cent		75	85
high test		85	90
caustic, 48 ℔ cent		1 50	1 60
Newcastle, 48 ℔ cent		—	—
high test		—	—
Soda bicarb., English		1 50	2 00
American		1 35	1 50
si carbonate		1 60	1 75

Caustic solvay 60 % cent	1 30	@1 90
70 " "	1 50	@1 60
74 " "	1 [illegible]	@1 65
foreign caustic, 60 % cent	2 30	@2 40
70 " "	1 75	@1 80
74 " "	1 80	@1 85
76 " "	2 00	@2 10
Sal, English	62½@	67½
American	55 @	60

Acids.

Acid, acetic	1 40	@1 50
chemically pure	18 @	20
oxalic	6¼@	6¾
pyroligneous	9 @	12
sulphuric, 60 deg	90 @	1 20
66 deg	1 20	@1 75
bulk 50 deg	11 50	@12 00
muriatic, 18 deg	1 20	@1 25
20 deg	1 35	@1 85
22 deg	1 30	@2 25
aqua fortis, 36 deg	3½@	4¼
38 deg	3¾@	4½
40 deg	4⅛@	4¾
42 deg	4¼@	4⅞
nitric, 36 deg	3⅝@	4⅜
38 deg	4⅛@	4⅝
40 deg	4½@	4⅞
42 deg	4¾@	5¼
tartaric crystals	31½@	31¾
powdered	32 @	32½

Miscellaneous Chemicals.

Acetate of lime, gray % lb.	1 25	@1 30
brown	90 @	95
Alum, lump	1 65	@1 75
ground	1 75	@1 85
porous	1 75	@2 00
Argols, plates	24 @	—
red	4½@	4¾
Arsenic, white	4¼@	4½
red	8 @	8½
Brimstone, crude, 2ds...per ton	24 50	@25 00
3ds	21 50	@23 00
Cream tartar, crystals, p c % lb.	24½@	24¾
powdered, 99 p c	24¾@	25
Chloride of calcium	90 @	1 00
Copperas	55 @	62½
Glauber salts	50 @	75
Nitrate of lead	6¼@	6¾
soda	1 70	@1 75
Chlorate of soda	9½@	10
Sugar of lead, brown	5 @	5¼
white	7¼@	7½
Saltpeter, crude	5 @	5¾
refined	6½@	7½
Sulphate alumina	1½@	2½
Vitriol blue	3½@	3¾

Ammoniates, Potashes, Etc.

Ashes, pot, 1st sorts % lb.	3½@	3¾
pearl	5 @	5¼
Potash, chlorate	8¾@	9
powdered	9 @	9½
carb	3½@	5
caustic	4½@	6
dbl m'ure salt 48@53 % cent.	1 03	@1 15
dbl m'ure salt 48@53 % cent. less than 25 tons	26 00	@33 00
sulph of, basis 90@98 % cent.	1 99½	@2 03
90@98 % cent. less than 25 tons	40 00	42@ 00
Kainit, 23 % cent. S. of P. % ton	8 80	@9 30
less than 25 tons	17 00	@13 75
Sylvinit, 35@37 % ct. P. % unit	39 @	45
Aqua am'ia (in cbys) 16 deg. % lb	2½@	3
18 deg	3 @	3½
20 deg	3½@	4
26 deg	5½@	6
Ammoniac, sal, gray	4¼@	4¾
granulated	5 @	5¾
lump	8¼@	8¾
Ammonia, sulphate	2 50	@2 55
Potash muriate, % 100 lbs	1 78	@1 90
less than 25 tons	39 00	@42 50

AMMONIATES, ETC.:

Blood, dried, red, per unit, high	1 80	@ 1 85
low grade, per unit	1 75	@ 1 80
Concentrated tankage per unit	1 90	@ 1 95
Bones, rough, per ton	18 00	@21 00
ground, per ton	20 00	@21 00
Bone meal	23 00	@24 00
Bone black, refuse	20 00	@21 00
Fish guano, dried	17 50	@ —
acidulated	12 00	@ —
Phosphate rock, f. o. b. Char'n	3 25	@ 3 75
f. o. b. Peace River	2 50	@ 3 00
Land Pebble 70 per cent	3 00	@ 3 25
Acid, phosphate, 15@18 per cent	60 @	65

Dyestuffs.

Acid, picric, best crystals % lb.	25 @	26
tannic, commercial	3½@	40
crystals	70 @	80
Acetate of soda	4 @	6
Albumen, egg	64 @	70
blood	18 @	20
Alizarine	12½@	18
Aniline oil	10½@	11
salt, crystals	9 @	9½
Annatto	10 @	25
seed	— @	7
Antimony, oxymuriate	4 @	6
salt, 65 per cent	16 @	17
47 per cent	12½@	15
tartar emetic	23½@	24
Bichromate of potash, Scotch	9¾@	10
American	9¾@	10
Bichromate of soda	8 @	8¾
Bisulphite of Soda	1½@	2¼
Carmine of indigo	60 @	75
Cochineal, Teneriffe silver	— @	25
black	28 @	29
gray black	32 @	33
Cudbear, French	12 @	18
concentrated	23 @	25
English	10 @	18
Cutch	3½@	7¾
Dextrine, imported	5½@	6
domestic	5¼@	5¾
corn	2 05 @	2¼
Divi Divi % ton	37 50	@50 00
Flavine % lb	18 @	25
Fustic stick % ton	11 00	@18 50
Gambier % lb.	2¾@	3 00
Garancine	6 @	8
Hyposulphite of Soda	1 60	@ 2 00
Indigo, Bengal, low grade	57½@	62½
medium	65 @	80
high grade	90 @	1 25
Kurpahs, medium to good	60 @	70
higher grades	75 @	90
Guatemalas	45 @	1 00
Manila	35 @	55
Madras	25 @	40
Indigotine	95 @	1 80
Logwood stick % ton	17 00	@22 00
Madder, Dutch % lb.	@	8
French	6 @	7½
Myrabolans	1¾@	2¾
Muriate of tin	6 @	8
Nitrate of iron, commercial	1 @	1¾
true	3½@	4½
Nutgalls blue Aleppo	12½@	14
Chinese	14 @	15
Persian berries	7 @	8
Prussiate of potash, yellow	15½@	15¾
red	37 @	40
Prussiate of soda	12½@	13
Phosphate of soda	2¾@	3½
Quercitron % ton	— @	18 00
Sago flour	3½@	3¾
Salts of tartar	3¼@	7
Soluble oil, 50 per cent	6 @	6½
75 per cent	9 @	9½
Sumac, Sicily % ton	44 00	@50 00
Virginia	38 00	@42 00
Starch corn % lb.	1 37 @	3
potato	3½@	3¾
wheat	5½@	6
Stannate of soda, 50 soluble	8 @	12
40. soluble	6 @	10
25. soluble	5 @	8
Tin crystals	14 @	14¼
Tapioca flour	4 @	4¼
Vanadiate ammonium % oz.	— @	60

SHIPPED DYEWOODS, ETC:

Barwood	2 @	2¼
Camwood	6 @	8
Fustic, Jamaica	1¼@	1½
Cuban	1¼@	—
Hypernic	3 @	3¼
Logwood, Campeachy	1½@	1¾
Red sanders	2¾ @	3
Turmeric ground	5½@	6¼
powdered	6½@	7

EXTRACTS

Archil, double % lb	8 @	13
concentrated	16 @	18
Barberry, French	22 @	28
Chestnut	2½@	4½
oak	2¾@	3¼
Hemlock	2½@	4½
Fustic, solid	8½@	10
liquid, 51 deg	6 @	14
Gall	15 @	18
Indigo	6½@	15
Logwood, solid	6½@	12
liquid, 51 deg	5½@	10
42 deg	4¾@	7
Persian Berry	13 @	15
Sumac	2¾@	6

Comparative Prices.

On June 28, in 1895, 1896 and 1897.

	1897	1896	1895
CHEMICALS.			
Bleaching powder	1 45	1 50	1 35
Brimstone, 3ds	$18 75	$18 25	$15 00
Caustic soda, 70 p. c.	1 90	2¼	1 22
Caustic soda, 60 p. c.	2 25	2 37½	2 25
Sal soda, Am	80	65	85
Soda ash, 48 p. c. carb	90	1 10	95
Soda ash, 48 p. c. caustic	1 10	1 25	1 10
Soda ash, 48-58 p. c. N. C.	—	—	—
Soda alkali, 48 p. c. B. M.	85	80	92½
Soda nitrate	1 75	1 72½	1 70
Cream tartar, crystals	23½	26	19½
Muriate of potash	1 78	1 78	1 78
Chlorate of potash	8¾	8¼	9¾
Kainit	8 80	8 80	8 85
PAINTS.			
White lead in oil	5¼	5¾	5¼
Litharge, Am. pow'd	4¾	4¾	4¾
Paris green	11½	12½	21½
Orange mineral	6¼	6¾	6¼
Ven. red, English	1 50	1 50	1 75
Ven. red, American	60	60	65
Barytes	$14 00	$14 00	$14 00
Whiting, commercial	35	40	30
DRUGS.			
Opium	2 25	1 95	1 85
Morphine, domestic	1 50	1 35	1 35
Quinine, makers	15-19	26-30	20
Quinine, dealers	15	26	24¼
Alcohol	2 29	2 31	2 35
Borax, city	5¾	5¾	5¼
Beans, tonka, (Ang)	1 65	2 10	1 85
Cubeb, XX	6	7	11
Cuttlefish	8	8¼	8½
Glycerine, American	12	16½	11
Oil, castor, city	12	9¼	10
Oil, cod liver, Nor	$22 00	$22 00	144 00
Oil, cassia	1 30	1 50	1 15
Oil, peppermint, tins	1 10	1 55	1 0
Oil, sassafras	35	38	32
Quicksilver	53	49¾	54
Asafœtida	14	12	15
Gum arabic, sorts	19	21	14½
Camphor bbls	39	40	53
Shellac, D. C	25	29	42
Senna, Alex. Nat'l	15	16	16
Senega root	25	28	40
Ipecac	1 65	1 85	1 15
Jalap	10	11	16
Canary seed, Smyrna	4¾	4⅞	2¾
Caraway seed, Dutch	5¾	5¾	6¾
Mustard seed, Cal. yel	2¾	2¾	2¾
Rapeseed, German	2¼	2¼	2¾
OILS.			
Cottonseed, prime, S. Y.	23¾	25	26¾
Olive Sicily	49	48	54
Cocoanut, Ceylon	5	5½	5 20
Lard, prime city	34	38	52
Linseed, domestic	29	37	58
Menhaden, prime crude	20	20	23
Whale, bleached winter	46	40	41
Sperm, bleached winter	48	49	57
Oil cake, western	$18 00	$16 75	$ —
Spirits turpentine	27	25½	29
DYESTUFFS.			
Bichromate, potash Am	10	10	8¾
Cochineal, Teneriffe S	26	28	28
Cutch, bag	5	4½	4¾
Gambier	2 70	3 65	5½
Indigo, Bengal, h gr'de	1 00	1 10	1 15
Prussiate potash, yel	13½	16	18
Sumac, Sicily, prime	$37 00	$46 00	$55 00
Starch, corn	1¾	2¼	2¾

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IMPORTS ENTERED IN NEW YORK FOR CONSUMPTION.

Week ending June 24.

ACID, BENZOIC—30 cs, 3,000 lbs, Pickhardt & K, Friesland, Antwerp

CARBOLIC—74 cks, 22,063 lbs, Albany Chem Co, Cymric, Liverpool
44 cs, 20 cks, 6,343 lbs, Schoellkopf, H & M, Cymric, Liverpool

OXALIC—50 cks, Roessler & H Chem Co, Thingvalla, Christiana

ALBUMEN—CORRECTION—50 cs, ex Friesland, reported in last issue to W A Brown & Co, should be Geisenheimer & Co

ALIZARINE—25 pkgs, 9,000 lbs, Farb of Elberfeld Co, Friesland, Antwerp
20 cks, Pickhardt & K, Friesland, Antwerp
2 cks, V Koechl & Co, Fr der Grosse, Bremen
6 cks, V Koechl & Co, Obdam, R'dam
5 cks, H P Ducas Co, Aller, Bremen

BLUE—7 cks, A Klipstein & Co, Friesland, Antwerp

ALKALI, REF—9 cks, J L & D S Riker, Civic, Liverpool

ALMOND MEAL—3 cks, G Luecders & Co, Aller, Bremen

ANILINE COLORS—12 bbls, F Bredt & Co, Friesland, Antwerp
53 pkgs, Farb of Elberfeld Co, Friesland, Antwerp
3 cks, C Bischoff & Co, Friesland, Ant
58 pkgs, A Klipstein & Co, Friesland, Ant
58 pkgs & 31 cs, Pickhardt & K, Friesland, Antwerp
2 pkgs, W J Matheson & Co, Friesland, Ant
15 bbls, J J Keller & Co, Friesland, Ant
13 bbls, Sykes & Street, Friesland, Ant
22 kgs, Geisenheimer & Co, F der Grosse, Bremen
8 cks & 1 cs, F Bredt & Co, F der Grosse, Bremen
14 cs, V Koechl & Co, F der Grosse Bremen
81 pkgs, N Y & Boston Dyewood Co, Pennsylvania, Hamburg
3 cks, Geisenheimer & Co, Kaiser Fredrick, Bremen
4 cs, C Bischoff & Co, Fr der Grosse, Bremen
32 cks & 1 cs, Sykes & Street, La Navarre, Havre
90 cks, V Koechl & Co, Obdam, R'dam
2 cks, Geisenheimer & Co, Noordland, Ant
62 cks, 2 cs, C Georgi, Obdam, R'dam
17 cks, 8 cs, Pickhardt & K, Obdam, R'dam
5 bbls, P H Karcher & Co, Obdam, R'dam
3 kgs, B P Ducas Co, Southwark, Ant
39 cks, J Campbell & Co, Alexandria, London

OIL—9 cks, 1,433 lbs, R Holliday & Sons, Cevic, Liverpool

SALT—118 cks, C Bischoff & Co, Friesland, Antwerp
274 cks, 95,603 lbs, Geisenheimer & Co, Obdam, Rotterdam
56 cks, 22,400 lbs, Pickhardt & Co, Obdam, Rotterdam
CORRECTION—31 cks ex Noordland, reported in last issue to Geisenheimer & Co, should be H P Ducas Co

ANISEED—25 bgs, Parke, Davis & Co, Boudicca, London

ANNATTO—3 bgs, Park, Son & Co, Ardandhu, Jamaica
1 bg, J E Kerr & Co, Ardandhu, Jamaica

ANTIMONY OXIDE—2 cks, 2,315 lbs, Haberman Mfg Co, Obdam, R'dam

REG—34 cks, 22,848 lbs, Hendricks Bros, Minnewaska, London

ARCHIL—10 cks, J Campbell & Co, Noordland, Antwerp
5 cks, W J Matheson & Co, La Navarre, Havre

ARGOLS—64 cks, C Pfizer & Co, Citta di Messina, Messina
50 cks, 56,103 lbs, N Y Tartar Co, Neustria, Marseilles
626 bgs, 276,533 lbs, N Y Tartar Co, Pocasset, Bari
90 bgs, 21,288 lbs, C Pfizer & Co, Pocasset, Bari
70 cks, Tartar Chemical Co, Cevic, L'pool
87 bgs, Tartar Chemical Co, Victoria, Leghorn

ARSENIC—100 cks, 22,046 lbs, O Hann & Bro, Thingvalla, Stettin
271 cks, McKesson & Robbins, Brooklyn City, Bristol

BALSAM COP—33 cs, 3,033 lbs, Suzarte & Whitney, Abydos, Curacao
4 bbls, S Green, Origen, Para
24 bbls, 2,582 lbs, G G Cowl, Origen, Para
2 bbls, 794 lbs, Dodge & Olcott, Origen, Para
TOLU—14 cs, 1,580 lbs, G Amsinck & Co, Alene, Savanilla
11 cs, 1,000 lbs, J Agostini, Alene, Savanilla

BARBERRY JUICE—10 bbls, 4,262 lbs, O Hann & Bro, Pocasset, Trieste

BARIUM BINOXIDE—13 cks, 8,760 lbs, A Penchot, Rotterdam, R'dam

BARYTA NITRATE—20 bbls, Schoellkopf, H & M, Alexandra, London

BARYTES—35 cks, Gabriel & Schall, Obdam, R'dam

BAY RUM—25 bbls, 525 gls, Park & Tilford, Darlington, Arroyo

BLEACH—74 cks, 65,884 lbs, F A Reichard, Neustria, Marseilles
118 cks, 110,810 lbs, Fuerst Bros & Co, Southwark, Antwerp
25 cks, J L & D S Riker, Chicago, Newcastle
281 cks, J L & D S Riker, Cevic, L'pool

BONES—298 bgs, Morris Weile, Ceylon, Progreso

BONE BLACK—3 cks, P Uhlich & Co, Kaiser Fred'k, Bremen
40 cks, R F Downing & Co, Rotterdam, Rotterdam
30 cks, Geo S McKibbon, Obdam, R'dam

BRISTLES—2 cs, Lewisohn Imp & Tr Co, La Navarre, Havre
6 pkgs, Kahn & Kahn, La Navarre, Havre

BRONZE POWDER—9 cs, T Reissner, Barbarossa, Bremen
30 cs, Baer Bros, Fr der Grosse, Bremen
10 cs, A Sartorius, Fr der Grosse, Bremen
1 cs, T Reissner, Fr der Grosse, Bremen
4 cs, Fuchs & Lang Mfg Co, Fr der Grosse, Bremen
2 cs, Jaenecke Bros & F S, Kaiser Fred'k, Bremen
1 cs, 300 lbs, R F Lang, Pennsylvania, Hamburg

CAFFEINE—5 cs, 500 lbs, Schoellkopf, H & M, Minnewaska, London

CALCIUM, CHLO—34 dms, J L & D S Riker, Cevic, Liverpool

CALISAYA BARK—160 bls, N Y Quinine & Chem Wks, Chester, Southampton

CAMPHOR—390 tubs, 73,815 lbs, L Van Rensselaer, Vigilant, Kobe
189 tubs, 36,243 lbs, H J Baker & Bro, Vigilant, Hiogo
193 tubs, C Pfizer & Co, Vigilant, Kobe

CASSIA—500 bls, O Pressprich & Son, A Coburn, Hong Kong
300 cs, C von Pustau & Co, A Coburn, Hong Kong
300 bls, Littlejohn & Parsons, A Coburn, Hong Kong
500 cs, J W Phyfe & Co, A Coburn, Hong Kong
500 cs, J. Kissock & Co, A Coburn, Hong Kong

CHAMOIS—2 cs, T L Lutkins, Majestic, L'pool

CHEMICALS—79 cs, 20 demj, Schering & Glatz, Pennsylvania, Hamburg
29 pkgs, Merck & Co, Obdam, Rotterdam

CHEMICAL COMPOUND—29 cs, Lehn & Fink, Pennsylvania, Hamburg
22 pkgs, Merck & Co, Obdam, Rotterdam

PREP—6 cs, Roessler & H Chem Co, Pennsylvania, Hamburg
68 cks, R W Phair & Co, Pennsylvania, Hamburg
20 cks, Roessler & H Chem Co, Thingvalla, Christiana
26 cs, 30 demj, V Koechl & Co, Obdam, Rotterdam
32 cks, R W Phair & Co, Obdam, R'dam

SALT—100 cks, Pickhardt & K, Pennsylvania, Hamburg
30 cks, A Klipstein & Co, Friesland, Ant

CHINA CLAY—200 cks, 100 tons, Hammill & Gillespie, Wilhelm, Forrey
597 tons, Hammill & Gillespie, Wilhelm, Forrey
150 cks, 75 tons, Moore & Munger, Friesland, Antwerp
150 cks, 75 tons, L A Saloman & Bro, Obdam, Rotterdam

A. Klipstein & Company

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40 cks, 20 tons, Geo Hamilton, Cevic, L'pool
180 cks, 90 tons, Hammill & Gillespie, Cevic, Liverpool.

CHROME GREEN—5 cks, 2,499 lbs, C F Zentgraf, Obdam, Rotterdam

COAL TAR PREP—5 kgs, N Y & Boston Dyewood Co, Pennsylvania, Hamburg
18 cks, V Koechl & Co, Obdam, Rotterdam

PRODUCT—15 cs, G Gennert, Strathairly, Hamburg
3 cs, C Reinschild, Pennsylvania, H'burg

COBALT—5 cs, Schieffelin & Co, Pennsylvania, Hamburg

OXIDE—5 cs, 500 lbs, C. Cooper & Co, Umbria, Liverpool

COLOCYNTH—8 cs, 1,521 lbs, Parke, Davis & Co, Cevic, Liverpool
6 cs, 2,209 lbs, A U Andrus & Co, Umbria, Liverpool

COLORS—36 cks, Pickhardt & K, Pennsylvania, Hamburg
1 cs, A Kern & Co, F der Grosse, Bremen
6 cks, Toch Bros, Pennsylvania, Hamburg
40 cks, 1 cs, A B Ansbacher & Co, Pennsylvania, Hamburg
9 pkgs, Knauth, N & K, Pennsylvania, H'bg
2 cs, J. Marsching & Co, Kaiser Frederick, Bremen
1 cs, J Marsching & Co, La Navarre, Havre
10 cks, Pickhardt & K, Obdam, R'dam
5 cks, Rooney & Spence, Cevic, Liverpool

300 bgs, 25 tons, Hammill & Gillespie, Alexandra, London

FUSTIC—1,266 pcs, E Mendy, Albis, Tlacotalpan
2,410 pcs, H Marquardt Co, Minnie Bergen, Tuxpam
828 pcs, H Marquardt, Albis, Tlacotalpan
565,000 lbs, J W Wilson & Co, Albis, Tampico

GALLS—50 bgs, 9,216 lbs, B P Ducas Co, Boadicea, London

GELATINE—12 cs, P Puttmann, Obdam, R'dam

GENTIAN ROOT—10 bls, 2,356 lbs, J L Hopkins & Co, Cevic, L'pool

GINGER—4 bbls, J E Kerr & Co, Ardandhu, Jamaica
265 bgs, L German & Co, Umbria, L'pool

GLAUBER SALTS—14 cks, J J Keller & Co, Obdam, R'dam

GLASS CYL—25 cs, O G Hempstead & Co, Friesland, Ant
101 cs, Bendit, Drey & Co, Obdam, R'dam
14 cs, Van Horne, G & Co, Obdam, R'dam
40 cs, Semon, Bach & Co, Obdam, R'dam
21 cs, L Popper & Son, Cevic, L'pool

MIRROR—6 cs, L Popper & Son, Fr der Grosse, Bremen
12 cs, P W Morris, Southwark, Ant

PLATE—8 cs, R F Downing & Co, Friesland, Ant

TRAG—23 cs, 5,340 lbs, Thurston & Braidich, Alexandra, London
7 cs, 1,589 lbs, Thurston & Braidich, Umbria, L'pool
46 cs, 11,964 lbs, Thurston & Braidich, Chester, S'h'ton
4 cs, 1,944 lbs, C Morningstar & Co, Aller, Bremen
5 cs, 1,220 lbs, C Morningstar, Chester, S'h'ton

INDIAN RED—10 cks, 10 kgs, D F Tiemann & Co, Colarado, Hull
30 kgs, 4,270 lbs, A B Ansbacher & Co, Colorado, Hull

INDIGO—5 cs, 1,788 lbs, O S Janney & Co, Neustria, Marseilles
30 cs, 9,414 lbs, J L & D S Riker, Europe, London

EXT—50 cks, 23,241 lbs, Pickhardt & K, Friesland, Ant

INSECT FLOWERS—5 bls, 2,211 lbs, J L Hopkins & Co, Pocasset, Trieste
6 bbls, 2,072 lbs, Bichels & Techow, Pocasset, Trieste

IRON OXIDE—55 cks, G A & E Meyer, Colorado, Hull
8 cks, Hemingway & Co, Minnewaska, Lonwon

ISINGLASS—2 cs, 217 lbs, Budde & Westerman, Fr der Grosse, Bremen

KAINIT—392,564 lbs, Heller, Hirsch & Co, Leander, H'b'g

LEAD OLEATE—1 ck, W H Scheel, Pennsylvania, H'b'g

LICORICE ROOT—130 bgs, 82 cs, Argumbeau & Ramee, Peninsular, Lisbon
20 bls, R Hilliers' Son Co, Cevic, L'pool
10 bls, A U Andrus & Co, Cevic, L'pool
26 pkgs, J L Hopkins & Co, Cevic, L'pool

LITHOPHONE—60 cks, 22,046 lbs, Gabriel & Schall, Fr der Grosse, Bremen

LOGWOOD—216 tons, J E Kerr & Co, Ardandhu, Jamaica
550,000 lbs, H Kainer & Co, Scheiswig, Gonaives

LONDON PURPLE—188 pkgs, Hemingway & Co, Minnewaska, London

MACE—62 cs, 6,613 lbs, D R James & Bro, Boadicea, London

MAGNESITE, CALCINED—5,554 bgs, 1,222,848 lbs, Knauth, N & K, Pocasset, Fiume

MAGNESIUM POWDER—2 cks, 220 lbs, E & H T Anthony, Pennsylvania, H'b'g

MANGANESE OXIDE—1 ck, W H Scheel, Pennsylvania, H'b'g

BETA—8 cks, V Koechl & Co, Obdam, R'dam

NAPHTYLAMINE—5 cks, 500 lbs, Pickhardt & K, Obdam, R'dam

NUTMEGS—50 cs, 3,333 lbs, J W Phyfe & Co, Boadicea, London
100 cs, 6,667 lbs, D R James & Bro, Boadicea, London
50 cs, J W Green, Boadicea, London
15 bbls, Frame, Alston & Co, Olivedene, Grenada
299 cs, L German & Co, Benalder, Singapore
75 cs, J Kissock & Co, Benalder, Singapore

NUX VOMICA—724 bgs, 38,249 lbs, Lehn & Fink, Colorado, Hull

OIL, ALMOND—5 cs, 800 lbs, Dodge & Olcott, Alexandra, London

ANISE—28 cs, 1,848 lbs, J B Horner, Boadicea, London
10 cs, 660 lbs, Stallman & Fulton, Pennsylvania, H'b'g

BERGAMOT—10 cs, E Marchi, Citta di Messina, Messina
2 cs, 51 lbs, Warrick Freres, Umbria, L'pool

DEAD—1,000 bbls, 5,000 gls, Josiah Smith, Colorado, Hull

FINISHING—5 cks, Alexander Dye Works, Pennsylvania, Hamburg

FUSEL—10 cks, 10,564 lbs, C Demler, Br Queen, Antwerp
20 cks, 6,918 lbs, W Zinsser & Co, Br Queen, Antwerp

HELIOTROPINE—3 cs, 75 lbs, G Lueders & Co, Kaiser Fredrich, Bremen

LEMON—20 cs, 573 lbs, Tyler & Finch Co, Citta di Messina, Messina
1 cs, G Capuziato, Citta di Messina, Messina
80 cs, H Marangola, Citta di Messina, Messina
88 cs, Fritzsche Bros, Umbria, L'pool
9 cs, G W Sheldon & Co, Pocasset, Messina
6 cs, 150 lbs, Manheim & E, Umbria, Liverpool
6 cs, 146 lbs, Warrick Freres, Umbria, Liverpool

MACE—1 cs, 200 lbs, J B Horner, Obdam, Rotterdam

OLIVE—4 cks, G Paresi, Citta di Messina, Messina
20 bbls, 941 gls, F Bredt & Co, Pocasset, Bari

ORANGE—2 cs, 49 lbs, Warrick Freres, Umbria, L'pool

Cream of Tartar **Tartaric Acid**

GUARANTEED 99—100 Per Cent. Pure.

TARTAR CHEMICAL COMPANY, 47 Cedar St. N. Y

20 dms, R F Downing & Co, Alexandra, London

CORKWOOD—1,624 bls, 124,445 lbs, Armstrong Cork Co, Peninsular, Lisbon
2,660 bls, H W J Bucknall, Peninsular, Lisbon
50 bls, Meinicke & Co, Germanic, L'pool
52 bdls, W J Farrell, Germanic, L'pool
400 bls, H W J Bucknall, Mongolian, Glasgow

CREOSOTE—500 cks, 20,000 gls, Schoelkopf, H & M, Alexandra, London

CUBEBS—50 kgs, 5,488 lbs, Schoellkopf, H & M, Chester, S'h'ton

CUTCH—33 cs, A Klipstein & Co, Ems, Genoa

CUTTLEFISH BONE—40 cs, 3,775 lbs, Tyler & Finch Co, Boadicea, London

DEXTRINE—197 bgs, 38,793 lbs, W Caldwell & Co, Mongolian, Glasgow
100 bgs, 22,046 lbs, F Rose & Co, Helene Rickmers, Stettin

DISINFECTANT—25 cks, 10,495 lbs, R Holliday & Sons, Cevic, L'pool

DRUGS—17 bls, 3,530 lbs, Peek & Velsor, Pennsylvania, H'b'g
5 bls, 1,166 lbs, Peek & Velsor, Ems, Genoa
10 bls, 1,448 lbs, Peek & Velsor, Leander, Hamburg

DUTCH METAL, LEAF—1 cs, Fuchs & Lang Mfg Co, Fr der Grosse, Bremen

DUTCH PINK—40 kgs, J L Smith & Co, Colorado, Hull

DYEWOOD EXT—35 cks, 20 cs, 19,881 lbs, Sykes & Street, La Navarre, Havre

EGG YOLK—50 cks, F Blumenthal & Co, Caprivi, Dundirk

FISH SOUNDS—9 bgs, C Ahrenfeldt & Son, Abydos, Curacoa

FOENUGREEK SEED—15 bgs, J L Hopkins & Co, Cevic, L'pool

FORMALDEHYDE—60 c'bys, Lehn & Fink, Br Queen, Antwerp

FULLERS EARTH—360 bgs, 30 tons, L A Saloman & Bro, Alexandra, London
190 bgs, 16 tons, L A Saloman & Bro, Bklyn City, Bristol

4 cs, Holbrook Bros, Germanic, L'pool

WINDOW—765 cs, Pittsburg Plate Glass Co, Friesland, Ant
1,737 cs, Holbrook Bros, Br Queen, Ant
396 cs, Semon, Back & Co, Br Queen, Ant
1,105 cs, Vanhorne, Griffen & Co, Br Queen, Ant
1,489 cs, J Fitzpatrick, Friesland, Ant
22 cs, Holbrook Bros, Germanic, L'pool

GLUE—66 cks, 24,802 lbs, A Hodge & Co, Colorado, Hull
19 cks, 27,438 lbs, L de Jonge & Co, Obdam, R'dam

GLYCERINE—70 dms, 76,522 lbs, M Leibmann & Co, Caprivi, Dunkirk
80 dms, 89,022 lbs, E S Kuh, Burgundia, Marseilles.
15 dms, 16,429 lbs, Alpers & Mott, Caprivi, Dunkirk
63 dms, 68,642 lbs, Alpers & Mott, Neustria, Marseilles
50 dms, 50,707 lbs, M Leibmann & Co, Neustria, Marseilles
75 dms, Jas Lee & Co, Ethiopia, Glasgow

GREEN, DRY—2 cks, A B Ansbacher & Co, Fr der Grosse, Bremen

GREASE, WOOL—50 bbls, 18,336 lbs, Swan & Finch Co, Colorado, Hull

GUM—16 cs, 6,564 lbs, F Schroeder, Southwark, Ant
1 bbl, A U Andrus & Co, Umbria, L'pool

ANIMI—9 cs, 2,356 lbs, E H Patterson, Minnewaska, London
15 cs, 3,470 lbs, E Hill's Son & Co, Minne-

ARABIC—16 cs, Lehn & Fink, Pocasset, Trieste
30 cs, Leber & Meyer, Ems, Genoa
15 bls, 4,875 lbs, Thurston & Braidich, Cevic, L'pool

ASAFOETIDA—7 cs, McKesson & Robbins, Minnewaska, London

KAURI—275 cs, 61,600 lbs, A Mason, Europe, London

SANDRAC—22 bgs, Rogers & Pyatt, Chester, S'h'ton

SENEGAL—100 bgs, 22,046 lbs, Thurston & Braidich, Umbria, L'pool

MEDICAL BARK—62 bls, Cohen & Co, Albis, Nassau
2 bls, Parke, Davis & Co, Cevic, L'pool

FLOWERS—20 bls, Parke, Davis & Co, Pocasset, Trieste

LEAVES—15 bls, Parke, Davis & Co, Cevic, L'pool

PREP—10 cs, E Levi, Fr der Grosse, Bremen
14 cs, Schieffelin & Co, Kaiser Fred'k, Bremen
2 cks, 16 cbys, W H Stiner & Son, Pennsylvania, H'b'g
1 cs, Lehn & Fink, Pennsylvania, H'b'g
1 cs, Dodge & Olcott, Alexandra, London
6 cs, McKesson & Robbins, Minnewaska, London

ROOTS—2 cs, A Guinaires, Boadicea, London
42 pkgs, Parke, Davis & Co, Pennsylvania, H'b'g
14 bls, 253 lbs, A U Andrus & Co, Pennsylvania, H'b'g
50 bls, R Hilliers Son Co, Cevic, L'pool

SEED—52 bgs, R Hilliers Son Co, Umbria, L'pool

MILLET SEED—200 bgs, Rosenstein Bros, Pennsylvania, H'b'g

MUSTARD SEED—300 bgs, 66,000 lbs, C Rosenstein & Co, Ohio, Hull
50 bbls, 11,125 lbs, Tyler & Finch Co, Pocasset, Trieste
100 bgs, 22,000 lbs, Knauth, N & K, Colorado, Hull
78 bgs, Thos McElroy, Europe, London

NAPTHOL—1 ck, R Halliday & Sons, Cevic, L'pool

50 cs, 1,250 lbs, Dodge & Olcott, Pocasset, Messina
6 cs, 363 lbs, G Lueders & Co, Southwark, Antwerp

ORRIS (CONCRETE)—1 cs, 10 lbs, G Lueders & Co, Kaiser Fredrich, Bremen

RAPE—50 bbls, 2,575 gls, Manhattan Oil Co, La Navarre, Havre

ROSE—2 cs, 44 lbs, T T Grossmith, La Navarre, Havre

SANDALWOOD—2 cs, 100 lbs, G Lueders & Co, Kaiser Fredrich, Bremen

SESAME—10 bbls, 589 gls, J B Horner, Neustria, Marseilles

TAR—264 bbls, R F Downing & Co, Friesland, Antwerp
88 cks, R F Downing & Co, Friesland, Antwerp

THYME—10 cs, G Lueders & Co, Aller, Bremen

OZOKERITE—534 bgs, 44,017 lbs, Smith & Nichols, Helene Rickmers, Stettin

PALM STEARINE—57 bbls, 23,126 lbs, W A L Vogt, Southwark, Antwerp

PARIS WHITE—58 cks, J L Smith & Co, Colorado, Hull

PEPPER—WHITE—216 bgs, 32,382 lbs, J W Phyfe & Co, Alexandra, London

PHOSPHATE—2,500 bgs, 560,000 lbs, Heller, Hirsch & Co, Br Queen, Antwerp

PIMENTO—73 bgs, Park, Son & Co, Ardandhu, Jamaica
3 bgs, J E Kerr & Co, Ardandhu, Jamaica

PLUMBAGO—21 cks, 13,426 lbs, R Crooks & Co, Friesland, Antwerp

TINNOL, A Paste that Sticks

NO Rust Spots on Tin. NO Peeling Off. NO Discoloring of Labels.
WRITE FOR SAMPLE AND PRICES TO
The Arabol Manufacturing Co., 12 Gold St., New York.
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POTASH Soda Ash Soda Prussiate **ACID** Extracts Gums
CYANIDE Sal Soda
PRUSSIATE Caustic Soda Etc. Acetic Phosphoric
CARBONATE Carbolic
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All Heavy and Fine Chemicals

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IMPORTERS—Commission Merchants—EXPORTERS.

FUERST BROS. & CO.

2 Stone St., NEW YORK, & 17 Bridge St.

Bleaching Powders

MINERALS
Fluorspar
Fullers Earth
China Clay
Barytes, Etc.

OILS
CASTOR
OLIVE
RAPE
COCOANUT
ESSENTIAL

CORRESPONDENCE SOLICITED.

POMADE—3 cs, G Lueders & Co, Aller, Bremen
POTASH, CARB—35 cks, Pickhardt & K, Obdam, R'dam
CHLO—200 kgs, 22,399 lbs, W R Peters & Co, Neustria, Marseilles
250 bbls, 55,725 lbs, Diamond Match Co, Marseilles
CYANIDE—30 cs, Fuerst Bros & Co, Friesland, Antwerp
MURI—1,000 bgs, Battelle & Rennick, Pennsylvania, Hamburg
PRUSS (YELLOW)—20 cks, 10,000 lbs, C de P Field, Ethiopia, Glasgow
SULPH—250 bgs, 55,997 lbs, H J Baker & Bro, Leander, H'burg
POTATO STARCH—500 bgs, 110,000 lbs, Devoy Bros, Helene Rickmers, Stettin
QUININE—115 cs, 57,500 ozs, G W Sheldon & Co, Fr der Grosse, Bremen
RENNET—2 cs, G W Sheldon & Co, Thingvalla, Christiana
105 cks, 1 cs, R W Phair & Co, Strathairly, Hamburg
8 cks, 2 cs, Stolz & Thomas, Thingvalla Copenhagen
SACCHARINE—5 cs, 662 lbs, Merck & Co, Kaiser Fred'k, Bremen
SARSAPARILLA—5 bls, 690 lbs, I Brandon & Bro, Alliance, Colon
SENNA—25 bls, J L Hopkins & Co, Phoenicia, Hamburg
25 bls, Fischer & Ewald, Pennsylvania, Hamburg
25 bls, R W Phair & Co, Pennsylvania, Hamburg
SHELLAC—55 chts, 17,920 lbs, Berry Bros, Germanic, L'pool
170 cs, F W Thurston & Co, Germanic, Liverpool
75 cs, Rogers & Pyatt, Chester, S'hampton
SOAP—25 cs, 3,291 lbs, Schering & Glatz, Obdam, Rotterdam
CASTILE—500 cs, 18,821 lbs, J D Nordlinger, Boadicea, London
STOCK—50 bbls, W R Peters & Co, Pocasset, Palermo
SODA ASH—20 tcs, 35,072 lbs, Wing & Evans, Germanic, Liverpool
53 cks, 86,170 lbs, Churchman & Co, Cevic, Liverpool
720 bgs, 201,600 lbs, Wing & Evans, Teutonic, Liverpool
CAUSTIC—100 dms, 75,000 lbs, E Hill's Son & Co, Cevic, L'pool
CHLO—100 kgs, 11,200 lbs, Schoellkopf, H & M, Europe, London
HYPO—187 cks, 22,130 lbs, G Gennert, Pennsylvania, Hamburg
NITRATE—20,617 bgs, W R Grace & Co, Hartfield, Pisaqua
4,110 bgs, 514 tons, W R Grace & Co, Minnewaska, London
SAL—280 cks, 112,000 lbs, Wing & Evans, Nomadic, L'pool
250 kgs, 37,500 lbs, Wing & Evans, Nomadic, L'pool
SULPHIDE—18 dms, 11,881 lbs, A Klipstein & Co, Pennsylvania, Hamburg
SOOT—7 cks, Thalman Printing Ink Co, Spaarndam, Rotterdam
SPONGE—16 bls, National Sponge & Chamois Co, Albis, Nassau
47 bls, Lasker & Bernstein, Albis, Nassau
STRONTIA, NITRATE—15 cks, Chemical Imp & Mfg Co, Obdam, R'dam
63 pkgs, Schoellkopf, H & M, Alexandra, London
SULPHUR ORE—7,009,915 lbs, Penna Salt Mfg Co, Conisclift, Huelva
SUMAC—420 bgs, 67,130 lbs, Leber & Meyer, Pocasset, Palermo
EXT—10 bbls, 5,412 lbs, J J Keller & Co, Friesland, Antwerp
TALC—200 bgs, 44,000 lbs, L A Saloman & Bro, Ems, Genoa
TONCA BEANS—3 cs, G G Cowl, Origen, Para
TURPENTINE—8 cs, Parke, Davis & Co, Cevic, L'pool
ULTRAMARINE—3 cs, A B Ansbacher & Co, Fr der Grosse, Bremen
15 cs, 2 cks, C F Zentgraf, Fr der Grosse, Bremen
VANILLA BEANS—13 cs, G Lueders & Co, La Navarre, Havre
3 cs, 439 lbs, T T Grossmith, Umbria, Liverpool
1 cs, P Harmony's Neph, La Navarre, Havre
6 cs, 451 lbs, French & American Fr Co, La Navarre, Havre
VANILLIN CORRECTION—2 cs reported in last issue to French & American Tr Co, ex La Bretagne, should be American Express Co
VERMILION—6 cs, J M Huber, Fr der Grosse, Bremen
5 cs, 810 lbs, Rooney & Spence, Umbria, Liverpool
VENETIAN RED—120 bgs, 152 cks, J L Smith & Co, Umbria, L'pool
20 bbls, Hemingway & Co, Minnewaska, London
WASH BLUE—5 bbls, 2,006 lbs, O Pressprich & Son, Br Queen, Antwerp
200 cs, H W Johnson, Colorado, Hull
WAX, BEES—65 pkgs, 4,690 lbs, C Wessells & Bro, Pennsylvania, Hamburg
2 bbls, 415 lbs, Smith, Lyon & F, Pr Maurits, Hamburg
79 pkgs, F G Strohmeyer & H A, Penninsular, Lisbon
CARNAUBA—438 bgs, 67,214 lbs, J H Rossbach & Co, Sirius, Pernambuco
MINERAL—35 bgs, 1 cs, 7,884 lbs, F G Strohmeyer & H A, Pennsylvania, H'burg
YELLOW BERRIES—60 bgs, Thurston & Braidich, Cevic, L'pool

WAREHOUSED.

ANILINE COLORS—2 kgs, Geisenheimer & Co, Fr der Grosse, Bremen
BAY RUM—35 bbls, A S Lascelles & Co, Ardanrose, Ponce
BRISTLES—10 cs, 1,333 lbs, Rump & Cattus, Benaider, Shanghai
22 cs, 2,933 lbs, Lewisohn Imp & Tr Co, Campania, Liverpool
BRONZE POWDER—3 cs, B Uhlfelder, Fr der Grosse, Bremen
DEXTRINE—200 bgs, 43,431 lbs, C Morningstar & Co, Hispania, Stettin
GLASS, WINDOW—306 cs, Dougherty & M, Friesland, Atnwerp
LOGWOOD EXT—112 cks, 59,038 lbs, Dillon & Co, Ardandhu, Kingston
MICA—55 cs, 4,521 lbs, C D Orth, Manitoba, London
OIL, ESS'L—2 cs, French & American Tr Co, La Bretagne, Havre
OLIVE—4 cks, 220 gals, A Bombara, Citta di Messina, Messina
YLANG YLANG—3 cs, 42 lbs, C Rockhill, Campania, Liverpool
PEPPER SHELLS—131 bgs, 22,691 lbs, Smith & Schupper, Manitoba, London
SODA CAUSTIC—50 dms, 37,500 lbs, E Hill's Son, La Bretagne, Havre
SPONGE—70 bls, Lasker & Bernstein, Albis, Nassau
VANILLIN—3 cs, 1,500 ozs, Fries Bros, La Bretagne, Havre
VANILLA BEANS—4 cs, French & American Tr Co, La Bretagne, Havre

Withdrawals from Bond.

Week ending June 24.

Aniline colors, cks	77
Anilin colors, cs	11
Aniline colors, kgs	12
Bronze powder, cs	3
Canary seed, bgs	100
Capsicums, bgs	109
China clay, cks	200
Corks, bls	153
Glass, window, cs	92
Gum, chicle, bls	120
Logwood ext., cks	31
Medical prep, cs	3
Ochre, cks	4
Oil, codliver, bbls	20
Oil, ess'l, cs	8
Oil, wintergreen, cs	5
Opium, cs	63
Potash, chlo, kgs	335
Pumice, bgs	135
Saltpetre, bgs	734
Soap, castile, cs	22
Soda, caustic, dms	5
Sponge, bls	25
Vanillin, cs	1

Boston Imports.

ALUM—20 cks, Storm King, Antwerp
ALIZARINE—167 cks, Beach & Co, Br Trader, London
19 cks, Storm King, Antwerp
AMMONIA—5 cks, Linder & M, Lancastrian, Liverpool
ANILINE SALT—49 cs & 5 bbls, Lancastrian, Liverpool
99 bbls, Storm King, Antwerp
BLEACH—90 cks, J L & D S Riker, Cephalonia, Liverpool
98 cks, Cephalonia, Liverpool
54 cks, J L & D S Riker, Norseman, L'pool
80 cks, J L & D S Riker, Lancastrian, Liverpool
211 cks, J L & D S Riker, Cambroman, Liverpool
CAMPHOR—55 tubs, Columbian, London
CHALK—150 tons, Br Trader, London
CHINA CLAY—950 cks, Cephalonia, Liverpool
60 cks, C S Bush, Norseman, L'pool
300 cks, Morey & Co, Lancastrian, L'pool
253 cks, Lancastrian, L'pool
60 cks, C S Bush, Cambroman, L'pool
286 cks, J B Moore & Co, Cambroman, Liverpool
COCOA BUTTER—21 cs, Columbian, London
CORKWOOD—25 bls, Storm King, Antwerp
DYESTUFF—35 cks, Scandinavian, Glasgow
GLASS, WINDOW—11,463 bxs, Storm King, Antwerp
GREASE—30 bbls, Columbian, London
78 bbls, Geo H Leonard, Br Trader, London
30 cks, Br Trader, London
60 cks, Lancastrian, L'pool
INDIGO—24 cs, Columbian, London
OIL—50 bbls, Cephalonia, L'pool
COAL TAR—330 cks, Br Trader, London
OLIVE—50 bbls, Brown Bros, Cephalonia, Liverpool
OXALATE—20 cks, Cephalonia, Liverpool
PITCH—50 cs, L W Ferdinand, London
500 bbls, Br Trader, London
POTASH—20 dms, Storm King, Antwerp
BICH—30 cks, J L & D S Riker, Scandinavian, Glasgow
SOAP—600 bxs, Weaver & Sterry, Br Trader, London
SODA—40 bbls, Storm King, Antwerp
ASH—54 cks & 1,040 bgs, 382,317 lbs, Wing & E, Lancastrian, Liverpool
35 cks, Linder & M, Lancastrian, Liverpool
35 cks, Cambroman, Liverpool
CAUSTIC—50 dms, W N Proctor, Lancastrian, Liverpool
50 dms, International S S Co, Cambroman, Liverpool
CRYSTAL CARB—56 bbls, J L & D S Riker, Cephalonia, L'pool
56 bbls, J L & D S Riker, Cambroman, Liverpool
NITRATE—6 cks, Columbian, London
SAL—140 bbls, Cambroman, Liverpool
TAR, COAL—150 bbls, Storm King, Antwerp
VENETIAN RED—125 bbls & 40 kgs, Cephalonia, L'pool

Philadelphia Imports.

AMMONIA, MURI—25 cks, E R Warrington & Co, Penniand, L'pool
30 cks, Chas Lennig & Co, Penniand, L'pool
SULPH—788 bgs, Penniand, L'pool
ARSENIC—200 cks, Roessler & H Chem Co, Ambria, Hamburg
50 cks, A Klipstein & Co, Ambria, Hamburg
BLEACH—158 cks, Penniand, L'pool
130 cks, J L & D S Riker, Penniand, Liverpool
COLOR—24 cks, Osborne, London
2 cks, Hanna-Schoelkopf Co, Penniand, Liverpool
50 cks, Ambria, Hamburg
CUTCH—19 cs, Ambria, Hamburg
FULLER'S EARTH—400 bgs, Osborne, London
MICA—23 cs, Osborne, London
GUM ARABIC—20 cs, Penniand, L'pool
PITCH, COAL TAR—200 bbls, James Lee & Co, Osborne, London
SOAP STOCK—100 bbls, Penniand, L'pool
SODA ASH—65 tcs, 113,613 lbs, Wing & Evans, Penniand, L'pool
158 bgs, Penniand, L'pool
67 cks, 112,301 lbs, Wing & E, Roumanian, Liverpool
CAUSTIC—50 dms, Edw Hill's Son & Co, Penniand, L'pool
50 dms, J L & D S Riker, Penniand, Liverpool
SAL—168 cks, 67,200 lbs, Wing & Evans, Penniand, L'pool

Baltimore Imports.

AMMONIA SULPH—462 bgs, Vedamore, Liverpool
ANTIMONY REG—71 cs, Strathgarry, Hamburg
ALUM—1,110 bgs, Tampico, Rotterdam
BLEACH—60 cks, Delano, Rotterdam
145 cks, Tampico, Rotterdam
56 cks, J L & D S Riker, Ikbal, Liverpool pool
209 cks, J L & D S Riker, Templemore, Liverpool
CINNAMON CHIPS—100 bls, Delano, Rotterdam
CORKS—4 bls, Tropea, London
FULLER'S EARTH—200 bgs, Tropea, London
FISH SOUNDS—18 bgs, Morianne, Rio G do Sul
GUM SANDARAC—15 cs, Tropea, London
KAINIT—939 tons, Strathgarry, Hamburg
500 tons, Marie Rickmers, Hamburg
LICORICE ROOT—140 bls, Tropea, London
MANGANESE BORATE—3 cks, Strathgarry, Hamburg
NAPHTHALINE—3 cks, Strathgarry, Hamburg
OIL, WOOD—1 cs, Tropea, London
PAINT—120 cks, Vedamore, Liverpool
PEPPER—228 bgs, Tropea, London
POTASH—160 cks, Strathgarry, Hamburg
SALT CAKE—30 cks, Vedamore, Liverpool
SODA, CAUSTIC—50 dms, Vedamore, Lpool
STICLAC—20 cs, Tropea, London

Newport News Imports.

ACID, CARBOLIC, CRY'L—120 cks, Wilfred, Schade & Co, Greenbrier, London
104 bbls, Mallinckrodt Chem Co, Shenandoah, Liverpool
BISMUTH, METAL—15 cs, Brown Bros & Co, Greenbrier, London
6 cs, Herf & Frericks Chem Co, Greenbrier, London
BLEACH—185 cks, J L & D S Riker, Shenandoah, Liverpool
FULLERS EARTH—1,440 bgs, L A Saloman & Bro, Greenbrier, London
900 bgs, G W Sheldon & Co, Greenbrier, London
OIL, COCOANUT—27 pipes, Isaac Winkler & Bro, Greenbrier, London
90 hhds, Isaac Winkler & Bro, Greenbrier, London
COAL TAR, PITCH—562 bgs, F W Olin, Greenbrier, London

New Orleans Imports.

PITCH—120 cks, Afghan Prince, Antwerp
SODA, CAUSTIC—431 dms, Afghan Prince, Antwerp
SILICATE—395 cks, Afghan Prince, Ant
TAR—100 cks, Afghan Prince, Antwerp

Galveston Imports.

GLASS, WINDOW—1,005 cs, Curityba, Ant
IRON SULPHITE—51 cks, Curityba, Ant

San Francisco Imports.

ALCOHOL—50 cs, J Gutte, Curacoa, Altata
DAMIANA—14 bls, W Loaiza & Co, Curacoa, Altata
4 bgs, Thannhauser & Co, Curacoa, Altata
MAGNESIA—77 cs, Bertin & Lepori, San Juan, Genoa via Panama
SOAP—8 cs, Bertin & Lepori, San Juan, Genoa via Panama

Montreal Imports.

ACID—5 kgs, Ormiston, London
CITRIC—10 kgs, Ormiston, London
BLEACH—10 cks, Lake Superior, Liverpool
BORAX—39 cks, Labrador, Liverpool
40 bbls, 13 cks, Lake Superior, Liverpool
CHLOROFORM—1 cs, Firndene, Antwerp
CHEMICALS—2 cs, Firndene, Antwerp
205 pkgs, Labrador, Liverpool
CREAM TARTAR—8 cks, Brazilian, London
8 cks, Carthaginian, Liverpool
COLORS—8 kgs, Firndene, Antwerp
1 cs, Amarynthia, Glasgow
GLYCERINE—25 drms, Lake Superior, Lpool
2 drms, Montcalm, Liverpool
LEAD, WHITE—72 cs, Firndene, Antwerp
OIL—190 bbls, Brazilian, London
LINSEED—300 cks, Norwegian, Glasgow
CASTOR—25 bbls, Labrador, Liverpool
PITCH—450 bbls, 375 cks, Sardinian, Glasgow
105 cks, Ormiston, London
250 bgs, 400 bbls, Norwegian, Glasgow
POTASH—10 bbls, 500 kgs, Lake Superior, Liverpool
PAINT—135 cs, Sardinian, Glasgow
SOAP—50 bxs, Labrador, Liverpool
50 cs, Amarynthia, Glasgow
126 bx, 2 cs, Ormiston, London
5 bxs, 738 cs, Lake Superior, Liverpool
60 bxs, 50 cs, Brazilian, London
SODA—50 dms, Amarythia, Glasgow
100 kgs, Lake Superior, Liverpool
SULPHUR—667 bgs, Carthaginian, L'pool
SODA, CAUSTIC—75 dms, Carthaginian, Liverpool
40 bbls, Carthaginian, Liverpool
SODA, TART—2 cks, Ormiston, London
WHITING—650 bgs, 800 bbls, Brazilian, London
ZINC OXIDE—32 cs, 20 cks, Firndene, Ant

EXPORTS FROM NEW YORK.

Week ending June 24.

ACID—3 cyl, $12, Catania, Nassau
3 cbys, $21, Abydos, La Guayra
MURIATIC—6 cbys, $19, Abydos, La Guayra
SULPHURIC—20 dms, $368, Catania, Tampico
3 cbys, $12, Madiana, St Croix
14 cbys, 3 cyl, Abydos, La Guayra
1 dm, $25, Alene, Port Limon
TARTARIC—40 kgs, $1,006, Amana, Melbourne
20 kgs, $515, Boadicea, Melbourne
ALCOHOL—5 bbls, $69, Prins Maurits, Hayti
AMMONIA—4 cyl, $48, Domenic, Para
1 dm, $3, Abydos, La Guayra
3 cyl, $130, Alene, Kingston
ANILINE COLOR—6 cks, $272, Rotterdam, R'dam
BARK—1,000 bgs, $1,100, Strathairly, H'b'g
BLEACH—80 bbls, $439, Catania, Tampico
CANDLES—110 bxs, $110, Madiana, Barbadoes
2 bxs, $6, Madiana, St Croix
1 bx, $1, Schleswig, Hayti
7 cts, $70, Mascotta, San Domingo
24 bxs, $12, Antilla, Nassau
5 cts, $50, Prins Maurits, Hayti
40 cs, $37, Prins Maurits, Carupano
5 cs, $53, Prins Maurits, Surinam

KRYOFINE
VANILLINE
OXALIC ACID
U. S. Patent. A new powerful, antipyretic and antineuralgic.
C. BISCHOFF & CO.
87–89 PARK PLACE, NEW YORK

3 cs, $71, Domenic, Para
30 bxs, $50, Abydos, Porto Cabello
23 bxs, $31, Abydos, Curacoa
150 bxs, $165, Alene, Cartagena
40 bxs, $67, Alene, Kingston
12 cts, $120, Tacoma, P Plata
18 pkgs, $54, Ardandhu, P Cortez
10 bxs, $10, Madiana, Antigua
22 cs, $124, Finance, Colon

CARBON—25 bbls, $850, Rydal Hall, Havre

COTTONSEED, CAKE—930 bgs, $1,350, Tauric, Liverpool
923 bgs, $1,335, Cufic, Liverpool

MEAL—8 bgs, $11, Alene, Kingston
351 bbls, 202 cs, $3,050, Amazon, Sydney

DYEWOOD EXT—17 bbls, $856, Noordland, Antwerp
30 kgs, $480, Amana, Melbourne
100 bxs, $330, Powhatan, Genoa

FARINA—200 bgs, $620, Abydos, Maracaibo

GLUCOSE—250 bbls, $1,703, Exeter City, Bristol
250 bbls, $2,475, Amazon, Sydney
15 bbls, $135, Norwood, Dunedin
30 bbls, $273, Amana, Adelaide
700 bbls, $7,000, Cufic, L'pool
693 bbls, $8,215, Furnessia, Glasgow
128 bbls, $1,184, Boadicea, Melbourne
100 bbls, $981, Biela, Manchester
100 bbls, $772, Campania, Liverpool
1,750 bbls, $17,500, Manitoba, London
500 bbls, $6,250, Ohio, Hull
550 bbls, $4,839, Brooklyn City, Bristol
50 bbls, $459, Gladys Royle, Cape Town

GLUE—4 bbls, $97, Catania, Progreso
1 bbl, $17, Madiana, St Croix
10 cks, $500, Lahn, Bremen
1 cs, $8, Norwood, Lyttleton
6 cs, $14, Amazon, Sydney
6 bxs, $52, Amana, Melbourne
1 bbl, $33, Mascotta, San Domingo
95 bbls, $3,450, Furnessia, Glasgow
3 cs, $28, Boadicea, Melbourne
1 cs, $3, Abydos, Curacao
1 bg, $11, Abydos, La Guayra
1 cs, $6, Alene, Savanilla
3 pkgs, $74, Catania, Vera Cruz
6 bgs, $72, Finance, Colon

GRAPE SUGAR—100 bxs, $300, Amazon, Sydney
3,500 bgs, $7,840, America, London
100 bxs, $150, Boadicea, Melbourne
250 bgs, $500, Furnessia, Glasgow
1,000 bgs, $1,500, Manitoba, London

GREASE, SOAP—25 bbls, $203, Burgundia, Marseilles
105 tcs, $1,537, Catania, Progreso
315 bbls, $3,650, Manitoba, London
968 tcs, $10,521, California, Marseilles
84 tcs, $1,133, Rotterdam, R'dam
700 tcs, $7,200, California, Marseilles
1,604 tcs, $28,184, Burgundia, Marseilles
20 tcs, $284, Catania, Campeche

LUB—40 bxs, $75, Norwood, Dunedin
179 bxs, $537, Amazon, Sydney
18 bxs, $57, Amana, Wellington
52 bxs, $170, Boadicea, Melbourne
13 bbls, $225, Buffon, Rio Janeiro
20 bbls, $275, Manitoba, London
57 bbls, $400, Boadicea, London
2 cs, $18, Rotterdam, R'dam
5 bbls, $95, Abydos, Maracaibo
7 pkgs, $11, Alene, Kingston
5 pkgs, $8, Alene, P Limon
7 pkgs, $7, Ardandhu, P Cortez
1 bbl, $11, Madiana, St Croix
5 bxs, $20, Catania, Tampico
3 kgs, $37, Finance, Colon
271 bxs, $411, Gladys Royle, Cape Town

KALSOMINE—96 cs, $885, Amazon, Sydney

LEAD—1,181 pigs, 112,037 lbs, $3,000, Phoenicia, Hamburg
1,175 pigs, 112,000 lbs, $3,024, Powhatan, Genoa
4,641 pigs, 448,175 lbs, $12,000, Tauric, Liverpool
4,636 pigs, 448,179 lbs, $12,000, Cufic, Liverpool
4,984 pigs, 448,273 lbs, $12,148, Mongolian, Glasgow
4,693 pigs, 448,042 lbs, $12,097, Biela, Manchester
2,358 pigs, 224,136 lbs, $6,000, Powhatan, Trieste
7,817 pigs, 731,247 lbs, $19,633, Phoenicia, Hamburg
4,476 pigs, $421,262 lbs, $10,340, Rydal Hall, Havre

LIME ACETATE—912 bgs, $1,045, Biela, Manchester
230 bgs, $672, California, Genoa
890 bgs, $1,870, Biela, Manchester
666 bgs, $1,550, Phoenicia, Hamburg
216 bgs, $550, California, Genoa

LEAVES—44 bls, $5,332 lbs, $863, Rydal Hall, Havre

MILK SUGAR—10 bbls, $230, Phoenicia, Hamburg

OIL, ALMOND—1 cs, $7, Abydos, Curacoa
6 cs, $37, Alene, Cartagena
5 cs, $38, Finance, Colon

CAKE—600 bgs, $1,800, Noordland, Antwerp
1,518 bgs, $4,486, Tauric, Liverpool
3,600 bgs, $10,800, Werkendam, Rotterdam
986 bgs, $6,605, Rotterdam, Rotterdam
1,500 bgs, $5,500, Brooklyn City, Bristol

COD—20 bbls, $380, Amazon, Sydney

CITRONELLA—1 cs, $15, Catania, Progreso

CORN—60 bbls, $600, Exeter City, Bristol
241 bbls, $3,275, Manitoba, London

COTTONSEED—50 cs, $150, Preference, Cayenne
1,100 bbls, $14,650, Burgundia, Marseilles
50 bbls, $945, Rydal Hall, Havre
44 cs & 16 bbls, $352, Catania, Campeche
23 cs & 4 bbls, $130, Madiana, Domenico
305 bbls, $4,108, Madiana, Martinique
30 bbls, $410, Madiana, Demerara
5 bbls, $66, Madiana, St Croix
775 cs & 10 bbls, $4,420, Kaffir Prince, Montevideo
88 bbls, $1,265, Amazon, Sydney
80 bbls, $1,182, Amana, Sydney
620 bbls, $8,252, California, Marseilles
85 cs & 6 bbls, $462, Mascotta, San Domingo
25 bbls, $386, J W Taylor, Buenos Ayres
240 cs, $1,012, J W Taylor, Montevideo
50 cs, $165, Boadicea, Melbourne
750 bbls, $12,261, Fulda, Genoa
1,095 bbls, Rotterdam, Rotterdam
1,000 bbls, $12,766, Powhatan, Venice
1,961 bbls, $29,400, Powhatan, Trieste
25 bbls, $400, Ohio, Hull
270 bbls, $4,250, La Bretagne, Havre
11 bbls & 59 cs, $316, Alene, Kingston
500 bbls, $7,884, Rydal Hall, Havre
2 cs, $6, Harold, Jamaica
200 cs, $630, L W Norton, Bahia
50 cs, $207, Tacoma, P Plata
3 bbls, $38, Madiana, St Lucia
727 bbls, $11,355, Burgundia, Marseilles
87 cs, $339, Catania, Campeche
151 cs, $540, Finance, Colon

ESS'L—3 cs, $81, J W Taylor, Buenos Ayres
3 cs, $70, Manitoba, London
15 cs, $1,500, Boadicea, London
1 cs, $20, Catania, Progreso
5 cs, $360, Rydal Hall, Havre
14 cs, $502, Phoenicia, Hamburg

FISH—1 cs, $6, Abydos, Curacoa

LARD—5 bbls & 5 cs, $165, Madiana, Demerara
100 bbls, $2,600, Roman Prince, Santos
2 bbls, $52, Abydos, Curacoa
2 bbls, $35, Alene, Cartagena
140 cs, $730, Gladys Royle, Cape Town
1 bbl, $25, Catania, Campeche
1 bbl, $29, Madiana, St Croix

LINSEED—3 bbls & 6 cs, $103, Catania, Campeche
2 bbls, $34, Schleswig, Hayti
2 cs, $8, Mascotta, San Domingo
3 cs, $15, Prins Maurits, Hayti
1 cs, $5, Abydos, Curacoa
2 bbls & 4 cs, $58, Abydos, Maracaibo
22 cs, $100, Alene, Cartagena
3 cs, $15, Alene, Port Limon
45 cs, $215, Catania, Vera Cruz
5 cs & 1 bbl, $42, Finance, Colon
3 cs & 1 bbl, $35, Ardandhu, Belize

LUB.—35 bbls, $166, Burgundia, Marseilles
180 bbls, $1,928, Noordland, Antwerp
55 cs, $109, Catania, Vera Cruz
5 bbls, 10 cs, $49, Madiana, Barbadoes
250 bbls, $1,250, Exeter City, Bristol
67 bbls, $648, Tauric, Liverpool
25 bbls, 93 cs, $273, Norwood, Dunedin
332 bbls, 440 cs, $2,562, Amana, Melbourne
351 bbls, 292 cs, $3,050, Amazon, Sydney
66 bbls, $469, La Bretagne, Havre
30 bbls, 500 cs, $1,592, J W Taylor, Buenos Ayres
799 bbls, $6,612, Boadicea, Melbourne
150 bbls, $1,847, California, Genoa
605 bbls, 50 cs, $4,082, Buffon, Rio Janeiro
695 bbls, $3,475, Critic, Dundee
215 bbls, $1,075, Prinz Regent Luitpold, Bremen
1 bbl, $26, Antilla, Nassau
1,020 bbls, $5,100, Mongolian, Glasgow
110 bbls, $517, J W Taylor, Buenos Ayres
1,000 bbls, $5,000, Dunstaffnage, Calcutta
1,365 cs, 100 bbls, $2,880, Roman Prince, Santos
24 bbls, 2 cs, $262, Dominic, Para
200 bbls, $2,327, Fulda, Genoa
80 bbls, $929, Furnessia, Glasgow
4 cs, $17, Boadicea, Melbourne
1,747 bbls, $9,135, Biela, Manchester
840 bbls, $4,375, Manchester, London
395 bbls, $2,075, Ohio, Hull
580 bbls, $2,900, Powhatan, Genoa
1,197 bbls, $6,060, Rotterdam, R'dam
786 bbls, $7,155, La Bretagne, Havre
170 bbls, $850, Fr der Grosse, Bremen
750 bbls, $3,750, Elise, London
2 bbls, $52, Abydos, Curacoa
2 cs, $8, Abydos, Maracaibo
1 cs, $2, Alene, Port Limon
14 bbls, $65, Alene, Kingston
1,299 bbls, $6,710, Rydal Hall, Havre
4,100 cs, $9,677, Gladys Royle, Cape Town
260 bbls, 2 cs, $3,370, Catania, Vera Cruz
15 bbls, 30 cs, $315, Finance, Colon
397 bbls, $1,985, Burgundia, Marseilles
1,807 bbls, 215 cs, $14,035, Phoenicia, H'b'g

MEAL—606 bgs, $1,033, Madiana, Barbadoes
2 bbls, $5, Madiana, St Thomas
6 bgs, $11, Prins Maurits, Surinam
32 bgs, $50, Alene, Kingston
200 bgs, $264, Madiana, St Kitts
2,000 bgs, $2,200, Phoenicia, Hamburg

MINERAL COLZA—225 bbls, $1,125, Mongolian, Glasgow
500 cs, $1,000, Dunstaffnage, Calcutta
50 bbls, $250, Rotterdam, R'dam
300 cs, $600, Powhatan, Genoa
250 bbls, $1,250, Elise, London
146 bbls, $730, Phoenecia, Hamburg
52 bbls, $260, Burgundia, Marseilles
100 bbls, $500, Rydal Hall, Havre

NEATSFOOT—4 bbls, $190, La Bretagne, Havre

MYRBANE—1 cs, $12, Alene, Cartagena

OLEO—200 tcs, $4,471, Noordland, Antwerp
120 tcs, $4,855, Furnessia, Glasgow
400 tcs, $11,200, Manitoba, London
.267 tcs, $6,550, Ohio, Hull
1,941 tcs, $41,275, Rotterdam, R'dam
1,588 tcs, $35,067, Phoenicia, Hamburg

OLIVE, FOOTS—10 bbls, $160, Catania, Progreso

PALM—1 bbl, $20, Catania, Progreso

PARAFFINE—4 cs, $10, Mascotta, San Domingo

PEP.—30 cs, $1,178, Aug Victoria, Hamburg
10 cs, $580, Rydal Hall, Havre

SESAME—3 cs, $25, Abydos, La Guayra

SEWING MACH—22 cs, $80, Amazon, Sydney
9 cs, $42, Amana, Brisbane
26 cs, $73, Boadicea, Melbourne
24 cs, $55, Dominic, Para

SPERM—2 cs, $5, Alene, Cartagena

WHALE—2 cs, $11, Catania, Progreso

PAINT—1 cs, $4, Finance, Colon
7 pkgs, $35, Catania, Vera Cruz
2 pkgs, $15, Madiana, Barbadoes
11 pkgs, $630, Amazon, Sydney
1 pkg, $9, Norwood, Dunedin
33 pkgs, $1,673, Amana, Sydney
6 pkgs, $24, Schleswig, Hayti
12 bbls, $113, Alene, Kingston
2 bbls, $32, Mascotta, San Domingo
12 bbls, $260, Buffon, Rio Janeiro
9 pkgs, $137, Antilla, Nassau
3 pkgs, $53, Dominic, Para
2 bbls, $125, Boadicea, London
9 bbls, $109, Rotterdam, R'dam
21 cs, $286, La Bretagne, Havre
66 pkgs, $95, Abydos, Curacao
14 pkgs, $150, Maracaibo
2 pkgs, $81, Alene, Port Limon
23 pkgs, $142, Alene, Cartagena
7 pkgs, $74, Ardandhu, Belize
40 pkgs, $308, Catania, Campeche
24 pkgs, $20, Finance, Colon
37 pkgs, $547, Gladys Royle, Cape Town

PEARL ASH—10 cks, $300, Rydal Hall, Havre

PETROLEUM—(See Petroleum Clearances on page 22)

PETROLEUM JELLY—17 cs, $478, Boadicea, Melbourne
484 cs, $7,235, Boadicea, London

PITCH—27 bbls, $47, Madiana, Barbadoes
45 bbls, $81, Madiana, Demerara
10 cs, $11, Mascotta, San Domingo
1 bbl, $2, Abydos, Curacao
5 bbls, $8, Alene, Cartagena
2 bbls, $5, Alene, P Limon
3 bbls, $5, Ardandhu, Belize
12 bbls, $25, Finance, Colon

PLUMBAGO—20 bbls, $595, Werkendam, Rotterdam

POTASH—159 cks, $3,901, Rydal Hall, Havre
CHLORATE—16 cs, $350, Finance, Colon

ROSIN—100 bbls, $285, Powhatan, Genoa
22 bbls, $75, Catania, Vera Cruz
4 bbls, $11, Madiana, Barbadoes
5 bbls, $13, Madiana, Demerara
300 bbls, $1,188, Kaffir Prince, Buenos Ayres
20 bbls, $53, Norwood, Dunedin
5 bbls, $17, Amazon, Sydney
120 bbls, $360, Amana, Adelaide
1 bbl, $3, Schleswig, Hayti
125 bbls, $385, H B Homan, Parahyba
200 bbls, $738, Cufic, Liverpool
200 bbls, $593, Mascotta, San Domingo
50 bbls, $200, Buffon, Rio Janeiro
300 bbls, $475, Plover, Bahia
5 bbls, $20, Prins Maurits, Carupano
410 bbls, $1,266, Domenic, Para
415 bbls, $795, Furnessia, Glasgow
341 bbls, $1,140, Abydos, P Cabello
20 bbls, $70, Alene, P Limon
51 bbls, $173, Alene, Cartagena
3 bbls, $11, Alene, Kingston
300 bbls, $867, L W Norton, Bahia
450 bbls, $1,279, L G Crosby, Desterro
2 bbls, $4, Catania, Tampico
42 bbls, $128, Gladys Royle, Cape Town

SARSAPARILLA—22 bls, $350, California, Marseilles
10 bls, $550, California, Genoa

SHEEP DIP—50 bbls, $1,650, Kaffir Prince, Buenos Ayres

SILEX—350 bgs, $267, Dominic, Para

SOAP—13 cs, $44, Catania, Nassau
7 cs, $195, Catania, Progreso
215 cs, $384, Madiana, Barbadoes
150 cs, $300, Madiana, Demerara
13 cs, $82, Madiana, St Thomas
1 cs, $23, Kaffir Prince, Buenos Ayres
57 bbls, $300, Tauric, Liverpool
10 cs, $114, Norwood, Lyttleton
83 cs, $1,538, Amazon, Sydney
34 cs, $1,638, Amana, Sydney
663 bxs, $348, Schleswig, Hayti
101 bbls, $560, California, Marseilles
2 cs, $40, Boadicea, Melbourne
5 cs, $94, Buffon, Rio Janeiro
1 cs, $37, Finance, Guayaquil
250 bbls, $1,357, Cufic, Liverpool
108 cs, $252, Antilla, Nassau
2 cs, $32, Orinoco, Bermuda
451 cs, $2,675, J W Taylor, Buenos Ayres
1 cs, $70, Roman Prince, Santos
2,180 bxs, $1,218, Prins Maurits, Hayti
25 bxs, $42, Prins Maurits, Surinam
2,700 bxs & 360 bbls, $8,756, Furnessia, Glasgow
60 cs, $200, Boadicea, Melbourne
1 cs, $15, Boadicea, London
2 cs, $22, Campania, Liverpool
35 cs, $348, Manitoba, London
1 cs, $8, Fr der Grosse, Bremen
2 cs, $18, Abydos, Curacao
176 bxs, $434, Abydos, Maracaibo
11 cs, $28, Alene, Kingston
25 cs, $35, Alene, P Limon
29 cs, $125, Alene, Cartagena
52 cs, $78, Ardandhu, Belize
1 cs, $5, Catania, Nassau
3 cs, $14, Catania, Progreso
722 bxs, $830, Finance, Colon
5 cs, $21, Gladys Royle, Cape Town

SODA ASH—560 bgs, $1,502, Boadicea, London
BICARB—2,000 cs, $1,386, Amana, Melbourne
100 kgs & 133 bxs, $245, Boadicea, Melbourne
CAUSTIC—2 dms, $35, Prins Maurits, Carupano
70 dms, $950, Boadicea, Melbourne
16 dms, $292, Abydos, Maracaibo

J. L. & D. S. RIKER

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FOR THE SALE OF THEIR VARIOUS BRAND OF

Bleaching Powder

Crude Drug Department

PARKE, DAVIS & CO., New York.

PURE—UNCOLORED—THE BEST.

SILICATE—10 bbls, $68, Finance, Colon
SPERMACETTI—20 cs, $350, Phoenicia, Hamburg
SPONGE—3 bls, $206, Lahn, Bremen
31 bls, $477, Prinz Regent, Luitpold, Bremen
4 bls, $81, Fulda, Genoa
27 bls, $116, Powhatan, Genoa
40 bls, $3,000, La Bretagne, Havre
43 bls, $678, Fr der Grosse, Bremen
STARCH—3 bxs, $24, Preference, Cayenne
23 bxs, $66, Catania, Nassau
24 pkgs, $40, Madiana, St Thomas
200 bgs, $980, Tauric, L'pool
16 bgs, $80, Amazon, Sydney
3 bxs, $5, Schleswig, Hayti
1,750 bgs, $9,482, America, London
32 pkgs, $66, Antilia, Nassau
1,630 bgs, $6,846, Mongolian, Glasgow
15 pkgs, $170, J W Taylor, Buenos Ayres
10 pkgs, $14, Prins Maurits, Hayti
300 bgs, $1,545, Biela, Manchester
2050 pkgs, $8,181, Manitoba, London
5 pkgs, $7, Alene, Kingston
20 bxs, $20, Ardandhu, Kingston
1 pkg, $8, Catania, Nassau
20 bxs, $35, Catania, Progreso
20 bxs, $35, Gladys Royle, East London
STEARINE—50 tcs, $800, Ohio, Hull
400 bbls, $7,200, Rotterdam, Rotterdam
35 tcs, $749, Rydal Hall, Havre
TALC—172 bgs, $150, Rydal Hall, Havre
TALLOW—25 hhds, $1,183, Rydal Hall, Havre
100 hhds, $5,000, Tauric, Liverpool
200 tcs & 1 ct, $3,151, Mascotta, San Domingo
425 tcs, $6,473, Strathairly, Hamburg
25 tcs, $642, Furnessia, Glasgow
708 tcs, $7,610, Manitoba, London
58 tcs, $660, Rotterdam, Rotterdam
1 bbl, $5, Abydos, Curacoa
1 kg, $4, Alene, Cartagena
100 tcs, $1,700, Phoenicia, Hamburg
25 tcs, $411, Europe, London
20 bbls, $379, Catania, Campeache
1 tc, $20, Finance, Colon
TAR—9 cs, $20, Catania, Progreso
15 bbls, $57, Dominic, Para
24 bbls, 10 cs, $103, Abydos, Maracaibo
2 bbls, $8, Alene, Cartagena
8 bbls, $30, Catania, Tampico
COAL—4 bbls, $15, Abydos, Maracaibo
4 bbls, $14, Alene, Cartagena
2 bbls, $8, Finance, Colon
TRIPOLI—150 bbls, $420, Rydal Hall, Havre
TURPENTINE—3 cs, $13, Finance, Colon
1 bbl, $14, Madiana, Barbadoes
10 cs, $34, Madiana, Demerara
5 cs, $21, Madiana, St Croix
1,850 cs, $6,038, Amazon, Sydney
595 cs, $1,845, Norwood, Dunedin
200 cs, $644, Amana, Adelaide
1 bbl, $10, Schleswig, Hayti
200 cs, $642, J W Taylor, Buenos Ayres
3 cs & 1 bbl, $25, Mascotta, San Domingo
2 bbls, $29, Antilia, Nassau
2,600 cs, $9,856, J W Taylor, Buenos Ayres
100 cs, $333, J W Taylor, Montevideo
55 cs, $194, Dominic, Para
100 cs, $322, Boadicea, Melbourne
1 cs, $6, Abydos, Curacoa
1 bbl & 38 cs, $147, Abydos, La Guayra
24 cs, $96, Alene, Savanilla
6 cs, $25, Alene, Port Limon
5 cs, $16, Alene, Kingston
200 cs, $700, St Mary, Santos
1 bbl, $16, Harold, Jamaica
3 cs, $10, Ardandhu, Belize
35 cs & 3 bbls, $171, Catania, Vera Cruz
16 cs, $55, Finance, Colon
303 cs, $1,100, Gladys Royle, Cape Town
VARNISH—320 gls, $392, Noordland, Antwerp
50 gls, $45, Finance, Colon
180 gls, $235, Catania, Tampico
13 gls, $11, Madiana, Barbadoes
1,862 gls, $831, Tauric, Liverpool
625 gls, $1,650, Amana, Sydney
610 gls, $445, California, Genoa
150 gls, $87, Mascotta, San Domingo
1,608 gls, $3,250, Furnessia, Glasgow
304 gls, $200, Fulda, Genoa
300 gls, $385, Manitoba, London
106 gls, $240, La Bretagne, Havre
116 gls, $153, Abydos, La Guayra
30 gls, $25, Alene, Savanilla
90 gls, $90, Phoenicia, Hamburg
1,940 gls, $2,720, Rydal Hall, Havre
5 gls, $4, Ardandhu, Belize
410 gls, $931, Catania, Vera Cruz
160 gls, $233, Gladys Royle, Cape Town
WAX, CERESINE—35 bgs, $710, Catania, Vera Cruz
PAR—5 cs, $46, Madiana, Barbadoes
150 cs, $1,500, Amazon, Sydney
90 cs, $1,025, Amana, Sydney
815 bbls & 103 bgs, $10,586, America, London
59 cs, $586, Dominic, Para
400 cs, $4,000, Manitoba, London
250 bgs, $2,500, Powhatan, Genoa
135 bgs, $1,350, Powhatan, Naples
285 bgs, $2,850, Powhatan, Leghorn
730 bgs, $7,300, Powhatan, Venice
100 bgs, $1,000, Powhatan, Trieste
25 bgs, $223, Alene, Port Limon
10 bbls, $75, Alene, Kingston
677 bgs, $5,770, Phoenicia, Hamburg
30 bgs & 30 cs, $600, Burgundia, Marseilles
150 bgs, & 100 cs, $2,500, Rydal Hall, Havre
300 bgs, $1,341, Catania, Vera Cruz
ZINC OXIDE—3 bbls, $45, Catania, Progreso
100 bbls, $750, Furnessia, Glasgow
ASHES—139 bgs & 23 bbls, $1,100, Exeter City, Swansea
DROSS—454 pcs, $650, Rotterdam, Rotterdam
REFUSE—120 bbls & 593 bgs, $3,000, Brooklyn City, Swansea

Boston Exports.

EXTRACT—10 bbls, Mikado, Hull
25 bbls, Moravia, Hamburg
GLUE—30 cks & 8 kgs, Corinthia, L'pool
GRAPE SUGAR—1,750 bgs, Roman, L'pool
3,500 bgs, Sagamore, L'pool
GREASE—2 bbls, Cestrian, Liverpool
OIL CAKE—400 bgs, Roman, L'pool
1,600 bgs, Corinthia, L'pool
3,343 bgs, Sagamore, L'pool
LARD—6 bbls, Beverley, Port Antonio
LINSEED—10 cs, Blomidon, St Vincent
NEATSFOOT—30 tcs, Roman, Liverpool
OLEO—325 tcs, Moravia, Hamburg
60 tcs, Sagamore, Liverpool
TALLOW—50 tcs, Moravia, Hamburg
RED—100 bbls, Austrian, Glasgow
WOOL—2 bbls, Halifax, Halifax
PAINT—12 cs, Yarmouth, Yarmouth
10 cs, Halifax, Halifax
17 cs, Blomidon, St Vincent
PITCH—18 bbls, Halifax, Halifax
SOAP—30 bxs, Yarmouth, Yarmouth
STARCH—100 bgs, Roman, Liverpool
TALLOW—255 tcs, Mikado, Hull
55 bbls, Moravia, Hamburg
TURPENTINE—25 cks, Yarmouth, Yarmouth

Philadelphia Exports.

DYEWOOD EXT—50 bbls, Waesland, Liverpool
50 bbls, Siberian, Glasgow
200 bbls, Rhyniand, Liverpool
GREASE—3 bbls, Waesland, Liverpool
135 tcs, Siberian, Glasgow
5 bbls, Rhyniand, Liverpool
PETRO—96 bbls, Waesland, Liverpool
270 bbls, Rhyniand, Liverpool
LIME ACETATE—187 bgs, Bloomaden, Rotterdam
1,372 bgs, Waesland, Liverpool
OIL CAKE—2,190 bgs, Bloomaden, Rotterdam
COTTONSEED—5,585 bbls, Bloomaden, Rotterdam
LUB—690 bbls, Waesland, Liverpool
1,690 bbls, Siberian, Glasgow
2,496 bbls, Bloomaden, Rotterdam
675 bbls, Rhyniand, Liverpool
160 bbls & 900 cs, Wm Mitchell, Hiogo
5,209 bbls, Friede, London
MIN'L COLZA—50 bbls, Siberian, Glasgow
140 bbls, Rhyniand, Liverpool
1,000 cs & 100 bbls, Wm Mitchell, Hiogo
1,000 bbls, Friede, London
OLEO—195 tcs, Bloomaden, Rotterdam
PAINT—18 pkgs, Siberian, Glasgow
STARCH—300 bgs, Siberian, Glasgow
TALLOW—260 tcs, Siberian, Glasgow
380 tcs, Waesland, Liverpool
100 tcs, Bloomaden, Rotterdam
200 tcs, Rhyniand, Liverpool
WAX, PAR—100 cs, Rhyniand, Liverpool
400 cs & 100 bbls, Wm Mitchell, Hiogo
3,725 bbls, Friede, London
575 bbls, Waesland, Liverpool

Baltimore Exports.

BARK EXTRACT—3,916 lbs, Crefeld, Bremen
4,480 lbs, Tropea, London
BRISTLES—13,854 lbs, Maryland, London
OIL, CAKE—225,500 lbs, Lord Londonderry, London
112,750 lbs, Scottish King, Antwerp
COTTONSEED—83,000 gls, Scottish King, Antwerp
LINSEED—78 gls, A R Kemp, Old Providence
LUB—13,000 gls, Scottish King, Antwerp
1,500 gls, Keemun, Glasgow
MEAL—674,240 lbs, Ulstermore, Liverpool
SASSAFRAS—47 bls, Ulstermore, Liverpool
SOAP—960 lbs, S E Douglas, Tarpum Bay
STARCH—308,709 lbs, Scottish King, Antwerp
STEARINE—415,769 lbs, Scottish King, Antwerp
TALLOW—22,233 lbs, Ulstermore, Liverpool
WAX, PAR—93,080 lbs, Keemun, Glasgow
ZINC DROSS—28,525 lbs, Scottish King, Antwerp

Newport News Exports.

GLUCOSE—33,500 lbs, $586, Kentucky, Copenhagen
GRAPHITE—31,700 lbs, $3,170, Pisa, Hamburg
OIL, LUB—18,500 gls, $1,850, Rappahannock, Liverpool
CAKE, C. S.—92,500 lbs, $832, Pisa, H'burg

Charleston Exports.

PHOSPHATE—900 tons, to Weymouth
775 tons, to Richmond

Savannah Exports.

OIL, ROSIN—375 bbls, $1,650, Thor, Rotterdam
PITCH—75 cs, $270, Thor, Rotterdam
ROSIN—5,900 bbls, $12,585, Germanic, R'dam
7,330 bbls, $17,491, Lizzie Ross, St Petersburg
4,500 bbls, $9,550, Admiral Tegetthopf, Rotterdam
3,000 bbls, $8,370, Thor, Rotterdam
6,000 bbls, $16,027, Glenogle, Buenos Ayres
TURPENTINE—1,970 cks, $25,837, Germanic, Liverpool
923 cks, $11,832, A Tegetthopf, Rotterdam
3,080 cks, $48,116, Thor, Rotterdam
10 cs, $24, Glenogle, Buenos Ayres

New Orleans Exports.

COTTONSEED—603 bgs, Cayo Largo, Havre
MEAL—15,640 bgs, Rooth, Rotterdam
OIL—1 bbl, Jarl, Bluefields
COTTONSEED—4,000 bbls, Roath, R'dam
PETROLEUM—15 bxs, Foxhall, P Cortez
ROSIN—24 bbls, Foxhall, P Cortez
SOAP—14 bxs, Foxhall, Porto Cortez
TALLOW—15 tcs & 15 bbls, Foxhall, P Cortez
WHITE LEAD—26 kgs, Jarl, Bluefields

San Francisco Exports.

ACID—16 dms, Walla Walla, Victoria
AMMONIA—4 cyl, Moana, Suva
OIL, LUB—10 bbls, Moana, Sydney
13 bbls, Moana, Auckland
WHALE—20 cs, Moana, Sydney
PAINT—4 cs & 6 kgs, Arago, Santa Rosalia
QUICKSILVER—10 flasks, Moana, Auckland
SODA, BICARB—1,232 lbs, Arago, Santa Rosalia
CAUSTIC—2,026 lbs, Arago, Santa Rosalia
SOAP—20 bxs, Moana, Sydney
TAR—6 bbls, Arago, Santa Rosalia
TURPENTINE—10 cs, Walla Walla, Victoria
VARNISH—8 cs, Walla Walla, Victoria

NEW YORK DOMESTIC RECEIPTS.

Week ending June 23.

ACID, BORACIC—109 bbls, Pacific C B Co, New Orleans
ALCOHOL—75 bbls, forward, New Orleans
100 bbls, Jas A Webb & Son, New Orleans
WOOD—70 bbls, W S Gray, P R R
BEESWAX—11 pkgs, order, O D S S L
3 bbls, forward, Wilmington
2 bbls, order N R boats
1 pkg, order, W S R R
BORAX—6,110 bgs, Pacific C B Co, New Orleans
55 bbls, order, H R R R
CLAY—54 cks, E M Sargeant, Charleston
188 cks, International Paper Co., Charleston
212 cks, R McNamee & Co, Charleston
548 cks, forward, Charleston
18 cks, G Hamilton, Charleston
1,005 bgs, Chesebrough Mfg Co, Jacksonville
935 bgs, Owl C Co, Jacksonville
100 cks, order, Savannah
COTTONSEED CAKE—930 bgs, McLaren & M, Jacksonville
DEXTRINE—320 bgs, C Morningstar Co, D, L & W R R
GLUCOSE—60 bbls, A Essing, W S R R
95 bbls, export, L V R R
60 bbls, D Stevenson B & Co, L V R R
100 bbls, F L Miller, L V R R
45 bbls, and 85 kgs, United Conf Assn, P R R
150 bbls, Eastern Ref Co, L V R R
50 bbls, T M Duche & Son, L V R R
50 bbls, Standard Ref Co, W S R R
60 bbls, Crandall & G Co, P R R
GREASE—144 pkgs, order, N R boats
166 pkgs, order, C R R of N J
10 bbls, order, H R R R
60 bbls, N Lopez & Co, P R R
39 bbls, Colgate & Co, D, L & W R R
60 pkgs, order, P R R
14 bbls, order, O D S S L
HIGHWINES—471 bbls, Am Dist Co, D, L & W R R
26 bbls, Wm Stern, D, L & W R R
260 bbls, J A Webb & Son, P R R
65 bbls, J L Hasbrouck, D, L & W R R
195 bbls, F O Boyd & Co, B & O R R
140 bbls, Nat'l Dist Co., P R R
65 bbls, J A Webb & Son, D, L & W R R
LEAD—2,025 pigs, Balbach S & R Wks, New Orleans
4,950 pigs, International M Co, New Orleans
367 pigs, Mayor, L & Co, W S R R
1,267 pigs, Colwell L Co, L V R R
498 pigs, Hendricks Bros H R R R
MUSTARD SEED—2,039 bgs, order, New Orleans
823 bgs, Maturin & H, New Orleans
OIL—94 bbls, Swan & F Co, B T L
40 bbls, S H Paine, E R R
25 bbls, order, C R R of N J
CAKE—600 bgs, Munn & J, D, L & W R R
748 bgs, export, E R R
240 bgs, Nat'l L O Co, E R R
260 bgs, export, H R R R
COTTONSEED—1,900 bbls, order, Savannah
243 bbls, order, C R R of N J
41 bbls, Oil Seeds P Co, New Orleans
250 bbls, Williams & F, Co, Charleston
850 bbls, export, O D S S L
68 bbls, Jos Macy's Sons, Brunswick
LINSEED—60 bbls, A L Clements, L V R R
70 bbls, T R Bagot, H R R R
60 bbls, J Wild Co, D, L & W R R
60 bbls, Macy & D, H R R R
120 bbls, Northfield & Co, W S R R
60 bbls, C M Childs, D, L & W R R
LUB—120 bbls, order, C R R of N J
OLEO—395 tcs, export, D, L & W R R
860 tcs, export, W S R R
180 tcs, export, H R R R
290 tcs, export, P R R
130 tcs, export, E R R
60 tcs, M Frankfort, P R R
150 tcs, export, C R R of N J
MEAL—1,250 bgs, A D Strauss & Co, P R R
RED—60 bbls, H W Woelber, D, L & W R R
PITCH—31 bbls, order, Savannah
POTASH—2 bbls, order, B T L
5 bbls, Welch, H & C Co, D, L & W R R
27 bbls, order, H R R
11 bbls, 85 kgs, Dillon & Co, H R R R
19 bbls, order, L V R R
1 bbl, order, W S R R
6 bbls, J Brower & Co, L V R R
3 bbls, order, D, L & W R R
ROSIN—4,001 bbls, order, Savannah
51 bbls, Bailey & M, Charleston
112 bbls, order, O D S S L
1,527 bbls, Tolar, H & Co, Brunswick
1,619 bbls, Bailey & M, Brunswick
341 bbls, Bailey & M, Jacksonville
66 bbls, Bailey & M, Charleston
440 bbls, M W Larendon, Charleston
734 bbls, Tolar, H & Co, Georgetown
305 bbls, Bailey & M, Georgetown
19 bbls, Tolar, H & Co, Wilmington
20 bbls, Welch & W, Wilmington
10 bbls, C A Woolsey Co, Wilmington
100 bbls, Paterson, D & Co, Brunswick
370 bbls, forward, Brunswick
132 bbls, S P Shatter & Co, Brunswick
SOAP STOCK—200 bbls, order, Savannah
SODA, ASH—120 bgs, E Morgan's Sons, H R R R
43 bbls and 220 bgs, order, O D S S L
330 bgs, J Pyle & Son, H R R R
75 bgs and 25 bbls, Welch & Welch, H R R R
100 bgs, J L Weller, H R R R
190 bbls and 100 dms, B T Babbitt, H R R R
SPELTER—198 pcs, order, L V R R
646 pcs, J Duval & Son, L V R R
150 pcs, N J Zinc Co, L V R R
1,092 pcs, order, O D S S L
STARCH—550 bxs, J Randles, H R R R
1,348 pkgs, Oswego Starch Co, D, L & W R R
125 bbls, W L Johnson & Co, P R R
50 bbls, order, P R R
150 bgs, F Rose & Co, W S R R
500 bxs, Koenig & S, P R R
125 bbls, I H Odell, P R R
150 bbls, Newark Baking P Co, H R R R
420 pkgs, F H Leggett & Co, H R R R
150 bbls, F Rose & Co, P R R
TALLOW—10 bbls, order, H R R R
15 pkgs, order N R boats
16 bbls, order, L V R R
87 pkgs, order, C R R of N J
18 bbls, order, P R R
250 tcs, export, L V R R
24 tcs and 42 bbls, W D Vandenhove & Co, N R boats

MERCK & CO.

Formaldehyde
Carbolic Acid, Crystals, Silver Label
Phosphoric Acid, Syrupy
Benzoate Soda, U.S.P.

University Place and Eighth Street, **NEW YORK,** Down-Town Office, 100 William Street.

12 bbls, H W Calef, W S R R
TALC—150 bgs, order, O D S S L
TAR—15 bbls, order, O D S S L
11 bbls, Bailey & M, Brunswick
56 bbls, Tolar, H & Co, Georgetown
350 bbls, forward, Wilmington
50 bbls, Am Mfg Co, Wilmington
17 bbls, C A Woolsey Co, Wilmington
14 bls, order, Wilmington
TURPENTINE, CRUDE—50 bbls, order, Wilmington
TURPENTINE—2,255 bbls, order, Savannah
256 bbls, order, O D S S L
34 bbls, Tolar, H & Co, Brunswick
229 bbls, Bailey & M, Brunswick
72 bbls, Bailey & M, Jacksonville
25 bbls, M W Larendon, Charleston
331 bbls, Tolar, H & Co, Georgtown
145 bbls, Bailey & M, Georgetown
153 bbls, forward, Wilmington
40 bbls, Tolar, H & Co, Wilmington
20 bbls, Bailey & M, Wilmington
200 bbls, M W Larendon, Wilmington
13 bbls, C A Woolsey Co, Wilmington
41 bbls, F W Blossom, Wilmington
48 bbls, F S Clark, Wilmington
10 bbls, H Louderbough, Wilmington
25 bbls, F S Clark, Charleston
13 bbls, Paterson, D & Co, Charleston
150 bbls, forward, Brunswick
2,020 bbls, Pratt Works, Brunswick
WAX—100 bbls, Lambert & B, P R R

Total Domestic Receipts.

At New York for week ending June 23, 1898.

		For Week.	Since Jan. 1.
Alcohol	bbls	175	6,016
Beeswax	bgs	17	367
Boneblack	bgs	....	19,629
Borax	bgs	6,110	45,652
Borax	bbls	55	113
Cottonseed	bgs	....	67
Ashes	bgs	....	5,225
Cake	bgs	930	7,523
Hulls	bgs	....	....
Meal	bgs	....	3,031
Flaxseed	bush	....	309,640
Glue	pkgs	....	506
Glucose	bbls	670	13,847
Grease	pkgs	493	24,839
Highwines	bbls	1,222	45,297
Lead	pigs	9,107	381,717
Mustard seed	bgs	2,862	9,657
Oil, cake	bgs	1,848	191,235
Cottonseed	bbls	3,352	143,460
Fish	bbls	....	1,632
Lard	bbls	....	3,487
Lubricating	bbls	120	7,228
Oleo stock	tcs	2,065	66,503
Pitch	bbls	31	3,133
Quicksilver	flks	....	4,795
Rosin	bbls	9,847	133,004
Soap stock	bbls	200	3,815
Spelter	pcs	2,086	57,257
Sponges	bls	....	1,056
Starch	pkgs	3,568	83,747
Stearine	pkgs	....	3,402
Sumac	bgs	....	2,800
Tallow	pkgs	432	21,693
Tar	bbls	513	13,893
Turpentine, crude	bbls	50	135
Spirits	bbls	6,040	59,409

Boston Domestic Receipts.

Week ending June 23.

CLAY—24 cks, Charleston
GREASE—292 bbls
ROSIN—90 bbls, Charleston
TALLOW—239 bbls, 6 pkgs and 60 tcs
TURPENTINE—43 cks, Charleston

Baltimore Domestic Receipts.

Week ending June 22.

CLAY—641 bgs and 12 cks, Savannah
OIL, ROSIN—75 bbls, Savannah
PITCH—145 bbls, Savannah
ROSIN—4,081 bbls, Savannah
TURPENTINE—155 bbls, Savannah

Wilmington Domestic Receipts.

Week ending June 22.

ROSIN—2,875 bbls
TAR—308 bbls
TURPENTINE—829 cks
CRUDE—301 bbls

Charleston Domestic Receipts.

Week ending June 22.

ROSIN—2,140 bbls
TURPENTINE—76 cks

Savannah Domestic Receipts.

Week ending June 22.

ACID—1 car
CLAY—100 cks
COTTONSEED MEAL—13 cars
NAPHTHA—1 car
OIL, COTTONSEED—300 bbls
PHOSPHATE—1 car
ROSIN—11,274 bbls
TURPENTINE—4,911 bbls

New Orleans Domestic Receipts.

Week ending June 22.

BONES—4 cars
BORAX—3,340 bgs
BRIMSTONE—2 cars
COTTONSEED—7 cars, 15,673 bgs
CAKE—42 cars
MEAL—21 cars
FERTILIZER—4 cars
GLUCOSE—9 cars
LEAD—8,215 pigs
NAPHTHA—7 cars
OIL, COTTONSEED—17 cars and 1,560 bbls
QUICKSILVER—675 flasks
PHOSPHATE—11 cars.
PITCH—38 bbls
ROSIN—615 bbls and 1 car
SOAP—1 car
STOCK—505 bbls
STARCH—1 car and 1,400 bxs
TURPENTINE—104 bbls and 2 cars
TAR COAL—20 bbls
WHITE LEAD—280 kgs

San Francisco Domestic Receipts.

Week ending June 18.

AMMONIA—5 bbls, Miller, Sloss & Scott, via Vancouver
GREASE, AXLE—5 bbls, C G Bennett, via Vancouver
OIL—50 pkgs, W P Fuller & Co, from Alaska
1 car Standard Oil Co., overland
LINSEED—60 bbls, Yates & Co, via Vancouver
COD LIVER—60 bbls, M E Cameron, via Vancouver
60 bbls, Haas Bros, via Vancouver
SOAP—4 cs, A & T Weil, via Vancouver
3 cs, D H McConnell & Co, via Vancouver
STARCH—50 bbls and 250 bxs, Wilshire, Brison & W, via Vancouver

GOODS ON THE WAY TO THE UNITED STATES BY RAIL.

Calcutta.

TO NEW YORK.

Nile, 1,240 bgs saltpetre, 2,000 bls jute, 12,399 bls jute butts
Dundonald, 3,027 bgs saltpeter, 4,228 bls jute, 10,593 bls jute butts
Forteviot, 1,294 bgs saltpeter, 9,256 bls jute, 13,637 bls jute butts
Dunreggan, 2,240 bgs saltpeter, 7,050 bls jute, 2,751 bls jute butts

TO PHILADELPHIA.

Kentmere, 2,604 bgs saltpetre, 12,186 bls jute

TO BOSTON.

Ceylon.

TO NEW YORK.

Singapore.

Columbus, 9,500 bls gambier
Stella Del Mare, 9,500 bls gambier
McLaurin, 8,000 bls. gambier
Drumpark, 11,000 bls gambier

TO BOSTON.

Sachem, 6,000 bls gambier

West Coast South America.

TO THE UNITED STATES.

Capac (ss), 25,000 bgs nitrate soda
Kosmos, 14,500 bgs nitrate soda
Cacique (ss), 25,000 bgs nitrate soda
Kynance, 24,000 bgs nitrate soda
Gael, 19,500 bgs nitrate soda
G B Beverino, 14,000 bgs nitrate soda
Annie Fletcher, 6,000 bgs nitrate soda
Isle of Erin, 11,000 bgs nitrate soda
Ardvar, 11,000 bgs nitrate soda
Centurion, 20,000 bgs nitrate soda
Edderside, 13,000 bgs nitrate soda
MacCullum Moore, 21,300 bgs nitrate soda
Speranza L, 11,000 bgs nitrate soda
Kenyon, 13,500 bgs nitrate soda
Condor (ss), 25,000 bgs nitrate soda
Santa Anna, 15,000 bgs nitrate soda
Coya (ss), 25,000 bgs nitrate soda
Capac (ss), 25,000 bgs nitrate soda
Blengfell, 13,000 bgs nitrate soda
Chrysomene, 20,000 bgs nitrate soda
Argomene, 20,000 bgs nitrate soda
Drumlarnig, 18,000 bgs nitrate soda
Carolla, 15,000 bgs nitrate soda
Matador, 16,000 bgs nitrate soda
Lancelot (ss), 25,000 bgs nitrate soda
La Escosesa, 12,000 bgs nitrate soda
Falls of Dee, 24,000 bgs nitrate soda
Chas. Racine, 18,000 bgs nitrate soda
Timandra, 18,000 bgs nitrate soda
Loch Trool, 16,000 bgs nitrate soda
Loch Fergus, 10,000 bgs nitrate soda
Melanope, 16,000 bgs nitrate soda
Calluna, 17,500 bgs nitrate soda
Othello, 18,500 bgs nitrate soda
Grace Horwar, 21,600 bgs nitrate soda
Bede (ss), 25,000 bgs nitrate soda
Maori (ss), 24,000 bgs nitrate soda
Albuewa, 17,000 bgs nitrate soda
Queen Victoria, 20,000 bgs nitrate soda
Tyr (ss), 23,000 bgs nitrate soda
Thetis, 15,000 bgs nitrate soda

RECORD OF VESSELS.

Port and Name.	Sailed.
Auckland.	
Calcutta.	
Kentmere	March 5.
Nile	March 11.
Dundonald	March 26.
Forteviot	April 7.
Dunreggan	April 13.
Singapore.	
Columbus	Feb. 25.
Stella Del Mare	March 31.
Sachem	April 4.
McLaurin	April 23.
Drumpark	May 20.
Ceylon	
W. C. S. America.	
Kenyon	Due July.
Capac (ss)	Due July.
Kosmos	Due July.
Cacique (ss)	Due August.
Gael	Due August.
Kynance	Due August.
Blengfell	Due August.
Cacique (ss)	Due August.
G B Beverino	Due August.
Chrysomene	Due August.
Argomene	Due August.
Drumlarnig	Due August.
Carolla	Due August.
Matador	Due August.
Grace Horwar	Due August.
Centurion	Due September.
Condor (ss)	Due September.
Lancelot (ss)	Due September.
Loch Trool	Due September.
Loch Fergus	Due September.
Isle of Erin	Due October.
Ardvar	Due October.
Edderside	Due October.
MacCullum Moore	Due October.
Speranza L	Due October.
Santa Anna	Due October.
La Escosesa	Due October.
Bede (ss)	Due October.
Maori (ss)	Due October.
Annie Fletcher	Due November.
Coya (ss)	Due November.
Melanope	Due November.
Albuewa	Due November.
Calluna	Due December.
Copac (ss)	Due December.
Queen Victoria	Due December.
Tyr (ss)	Due December.
Falls of Dee	Due January, 1899.
Timandra	Due January.
Thetis	Due February, 1899.
Chas. Racine	Due February.
Othello	Due February.

Directory of the Paint Clubs in the United States.

Following is a list of officers and directors of paint, oil and varnish clubs of the United States:

NATIONAL PAINT, OIL AND VARNISH ASSOCIATION.

President—A. B. Garner, New York.
Vice-Presidents—Robt. H. Whitelaw, St. Louis; C. H. Howell, Philadelphia.
Secretary—D. Van Ness Person, Chicago.
Treasurer—A. Sherwood, Cleveland.
Auditor—L. E. Hearne, Cincinnati.
Directors—George L. Gould, Boston; Charles E. Field, Chicago; F. D. C. Hinchman, Detroit; M. B. Arnold, New York city; Samuel K. Felton, Philadelphia; W. W. Lawrence, Pittsburgh; H. D. Cutler, Kansas City; Charles D. Stevens, St. Louis; I. D. Washburn, Cincinnati; E. F. Van Zandt, Cleveland; W. A. Ramsey, Twin Cities.

PAINT AND OIL CLUB OF NEW ENGLAND.

(Organized Feb. 23, 1884.)

President—Jacob W. Hoffman, Boston.
Vice-President—Geo. H. Shaw, Middleboro.
Secretary—C. W. Willis, Boston.
Treasurer—William S. Cutler, Boston.
Directors—Frederic H. Newton, Boston; Lew C. Hill, Boston; Daniel G. Tyler, Boston; Walter Tufts, Boston; Charles M. Hay, Portland; J. William Rice, Providence; W. Henry Hutchinson, Lynn.

PAINT AND OIL CLUB OF PORTLAND.

(Organized Nov. 28, 1884.)

President—Charles M. Hay.
Vice-President—W. L. Blake.
Secretary and Treasurer—E. S. Everett.
Executive Committee—Leander W. Fobes, W. P. Millay, J. E. Goold.

PAINT, OIL AND VARNISH CLUB OF NEW YORK.

(Organized Feb. 26, 1887.)

President—Charles T. Pierce.
Vice-President—Runyan Pyatt.
Secretary and Treasurer—W. B. Templeton.
Executive Committee—W. H. Andrews, Carl Merz, S. V. V. Huntington, J. W. Coulstan, E. R. Drake, Henry Toch.

THE PAINT AND DRUG CLUB OF PITTSBURGH.

(Organized May 24, 1887.)

President—Chas. F. Nevin.
Vice-President—Geo A. Kelly, Jr.
Secretary—Geo. F. Smith.
Treasurer—C. F. Wells, Jr.
Executive Committee—Composed of the officers.

PAINT, OIL AND VARNISH CLUB OF CHICAGO.

(Organized May 31, 1887.)

President—Elliott Durand.
Vice-president—A. G. Cox.
Secretary—D. Van Ness Person.
Treasurer—M. Rosenthal.
Executive Committee—M. L. Barrett, E. H. Haines, E. N. Bement and officers.

ST. LOUIS PAINT, OIL AND DRUG CLUB.

(Incorporated June 1, 1887.)

President—Cyrus P. Walbridge.
Vice-president—F. Hammar.
Secretary—C. M. Shirley.
Treasurer—F. Westerbeck.
Directors—N. C. Robbins, E. H. Dyer, C. W. Blow, O. L. Biebinger, E. D. Concannon.

THE PAINT CLUB OF PHILADELPHIA.

(Organized Oct. 21, 1887.)

President—William Waterall.
Vice-president—W. H. Wetherill.
Secretary—George B. Heckel.
Treasurer—S. K. Felton.
Executive Committee—Howard B. French, Charles H. Howell, Edward F. Beale, F. G. Elliott.

SYRACUSE PAINT AND OIL CLUB.

(Organized Dec. 4, 1888.)

President—Charles B. Everson.
Vice-President—C. A. Reeve.
Secretary and Treasurer—William Huench.
Executive Committee—Charles B. Everson, C. A. Reeve, William Muench, C. W. Snow, P. J. Mack.

DETROIT PAINT, OIL AND VARNISH CLUB

(Organized Nov. 12, 1889.)

President—Thomas Neal.
Vice-President—F. F. Whalen.
Secretary—John Schroder.
Treasurer—William Boydell.
Executive Committee—S. E. Pitman, W. P. Fuller, Wm. Stridiron.

THE CINCINNATI PAINT CLUB.

(Organized Dec. 21, 1889.)

President—W. H. Miller.
Vice-President—L. H. Bolce.
Secretary—G. R. Nutty.
Treasurer—Edgar Wilson.
Executive Committee—J. Gordon Taylor, Robt. McF. Smith, Jos. F. Piepmeyer, and the officers.

PAINT, OIL AND GLASS CLUB OF NEBRASKA.

(Organized March 7, 1890.)

President—Frank B. Kennard.
Vice-President—F. E. Ritchie.
Secretary—M. J. Waugh.
Treasurer—S. B. Hayden.
Executive Committee—C. F. Weller, Wm. Cummings, C. J. Daubach and officers.

KANSAS CITY PAINT, OIL AND VARNISH CLUB.

(Organized March 13, 1890.)

President—Horace S. Lynn.
Vice-President—John A. Snedeker.
Treasurer—F. M. De Bord.
Secretary—W. R. Claypool.
Executive Committee—Chas. Campbell, John A. McDonald, I. Lewis and officers.

BROOKLYN PAINT DEALERS' ASSOCIATION.

(Organized March 26, 1890.)

President—A. M. Montignani.
Secretary—Samuel M. Wood.
Treasurer—S. B. Kraus.
Executive Committee—Composed of the officers.

NEW ORLEANS PAINT CLUB.

(Organized ——, 1890.)

President—B. F. Eshelman.
Vice-President—J. Watts Kearney.
Secretary—Maximilian Herrmann.
Treasurer—John M. Wiemann.
Executive Board—Geo. W. Hyde, T. W. Seaton, Chas. W. Mackie, J. W. Kearney, G. Pitard.

MILWAUKEE PAINT, OIL AND DRUG CLUB.

(Organized Nov. 6, 1890.)

President—Charles Baumbach.
Vice-President—J. E. Patton, Jr.
Secretary—George F. O'Neill.
Treasurer—Charles A. Meissner.
Executive Committee—C. H. O'Neill, David Hecht, J. E. Patton, Jr.

CLEVELAND PAINT, OIL AND VARNISH CLUB.

(Organized Sept. 3, 1891.)

President—C. J. Wilmot.
Vice-President—A. L. Stark.
Secretary and Treasurer—E. F. Van Zandt.
Board of Directors—A. Sherwood, A. B. Fish, F. H. Palmer, P. N. Smit.

DENVER PAINT, OIL AND VARNISH CLUB.

(Organized Jan. 28, 1892.)

President—B. C. Hubbell.
Vice-President—B. L. James.
Secretary—B. B. Brown.
Treasurer—B. L. James.
Board of Directors—J. J. McGinnity, E. F. Hallach and the officers.

SAN FRANCISCO PAINT, OIL AND VARNISH CLUB.

(Organized March 29, 1893.)

President—J. P. Jourdan.
Vice-President—J. O. Law.
Secretary—Saul Magner.
Treasurer—G. Ammerup.
Board of Directors—Charles M. Yates, R. R. Nason, S. H. Brown.

TWIN CITY PAINT, OIL AND DRUG CLUB.

(Organized Sept. 28, 1896.)

President—G. F. Piper, Minneapolis.
Vice-President—W. A. Ramsey.
Secretary—C. B. Lyon, St. Paul.
Treasurer—
Directors—H. H. Eliel, H. M. Hill, N. Leffingwell.

As soon as received we shall make corrections and include other clubs, and, as it is desired to keep a correct directory of the above, we ask the various clubs to notify us at once of any changes made.

Petroleum Trade of Korea.

U. S. Consul Horace N. Allen writes from Seoul about the petroleum trade of Korea as follows:

The Standard Oil Company completed the erection of extensive and substantial warehouses on an island in the harbor of Chemulpo last year. It appointed our American firm, Messrs. Townsend & Co., regular agents to handle its kerosene, and the consumption of this American product will increase. The natives have largely substituted this illuminant for the old vegetable oils in the districts near the open ports, and it is finding its way well into the interior.

A vigorous attempt was made to introduce Russian oil, but it was too heavy for use in the cold weather and too smoky. It soon spoiled the white paper of the Korean rooms, as well as the white clothes of the people. It will probably not figure largely in the customs returns hereafter. Some Langkat oil from Sumatra was introduced in cases made in imitation of those of the American company, but the tins were poor, and the oil leaked so badly that purchasers did not care for it.

The Japanese have the pernicious habit of taking old American tins and cases, and filling them with Russian tank or Japanese oil, and then selling this to the Koreans as good American oil. I have been unable to prevent this course; but the Standard Oil Company has, I believe, found a means of circumventing the would-be swindlers.

The imports during the past two years were as follows:

	1896	
Description.	Gallons.	Value.
American	1,349,740	$165,004.00
Russian	264,530	31,817.00
Japanese	6,500	837.50
Totals	1,620,770	$197,658.50

	1897	
Description.	Gallons.	Value.
American	2,010,820	$232,386.00
Russian	158,300	17,016.50
Japanese	42,480	4,310.00
Sumatran	103,230	11,671.50
Other kinds	.....	*18,189.00
Totals	2,314,830	$283,573.00

*This item probably refers to vegetable illuminating oils.

The Nichols Chemical Company

Manufacturing Chemists

32 Liberty Street, Mutual Life Building, NEW YORK.

CHICAGO BRANCH. - 64 & 66 Wabash Ave.

OH Vitriol — Sulphuric Acid, 98 per cent
Muriatic Acid — Bi-Sulphate of Soda
Blue Vitriol — Sulphate of Soda
Alum — Acetic Acid, etc., etc.
Sulphate of Alumina

Special Quotations given on Application.

Jas. L. Morgan & Co.

MANUFACTURING CHEMISTS,

47 Fulton Street, NEW YORK.

OIL VITRIOL — GLAUBER'S SALT — AQUA AMMONIA
NITRIC ACID — TIN CRYSTALS — ACETIC ACID
AQUA FORTIS — SULPHATE of SODA — SULPHATE of ZINC
MURIATIC ACID — SAL SODA — ACETATE of LEAD

Mixed Acid for Nitro-Glycerine, Etc.

HUDSON RIVER CHEMICAL WORKS
Shady Side, N. J.

Dundee Chemical Works

Germania Building, 62-64 William St., cor. Cedar, N. Y.

MANUFACTURERS OF

OIL OF VITRIOL — TIN CRYSTALS — BI-CHLORIDE OF TIN
MURIATIC ACID — TIN SOLUTIONS
NITRIC ACID — OX. MUR. OF ANTIMONY
AQUA FORTIS — STANNATE OF SODA
NITRATE OF IRON — SILICATE OF SODA
MURIATE OF IRON — SULPHATE OE SODA
NITRATE OF COPPER — ZINC CHLORIDE

Mixed Acid for Nitro-Glycerine a Specialty

ESTABLISHED 1839.

THE GRASSELLI CHEMICAL CO.

CLEVELAND, O. NEW YORK. ST. LOUIS, CINCINNATI.

MANUFACTURERS OF

SULPHURIC ACID, — BLUE VITRIOL,
MURIATIC ACID, — GLAUBER'S SALT (Neutral)
NITRIC ACID, — SAL SODA,
AQUA AMMONIA, — SULPHITE OF SODA.

CRYSTAL and TREMLEY PROCESS HYPO SULPHITE of SODA
Sulphide of Soda. Chloride of Zinc. Bi Sulphite of Soda.

NEW YORK Office, 63 & 65 Wall Street.

FAIRFIELD CHEMICAL WORKS

71 WALL STREET, NEW YORK.

Oil of Vitriol, Nitric Acid, Aqua Fortis, **ACIDS** Muriatic Acid, Aqua Ammonia, etc.

Mixed Acids for Nitro-Glycerine a Specialty

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Importers and Exporters of Chemicals

SPECIALTIES.—Fusel Oil, Alcohol (best German) Carbonate of Potash. Importers of American products (Wood Alcohol, Acetate of Lime, Sulphate of Copper, etc.) Correspondence solicited.

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Analytical Chemists and Engineers,

602 Times Building, PITTSBURG, PA.

Correspondence regarding any factory processes Solicited.

James Lee & Co.

COMMISSION MERCHANTS

72 & 74 Pine Street, New York

IMPORTERS OF

CAUSTIC SODA, SODA ASH, SAL SODA BLEACHING POWDER, OXIDE MANGANESE
CHLORIDE MANGANESE, CARBONATE OF POTASH, HYPOSULPHITE OF SODA,
PALM OIL, PALM KERNEL OIL, COCHIN OIL, CEYLON OIL.

SOLE AGENTS IN THE UNITED STATES FOR

CHARLES TENNANT & CO.

CHEMICAL MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

Complete prices current will be found on pages 36 and 37

Saturday Evening, June 25, 1898.

There has been a fair business done in domestic alkali for delivery over next fire. Coustic soda is rather unsettled, but a fair buying is reported for forward contracts at a shade lower prices. Outside of these articles there is very little interest being shown in chemicals. In speaking of the dull and unsatisfactory state of trade, a prominent business man said: "No amount of whistling by the daily press will convince those merchants unfortunately not possessed of Government contracts that business has not been seriously affected by the war in progress. Dry goods, carpets, furniture and the general necessaries of life have never been so low in price. In all the large metropolitan business houses the pay rolls are being curtailed and expenses reduced. There seems to be no good reason for this partial cessation of business, attended by difficult collections. Of recent years there has been a constant succession of events making the business future uncertain, until a great portion of our people have formed a mischievous habit of folding their hands pending developments. Some are even looking for excuses for neglecting their callings. Many are overtimid, and now will buy nothing, and, if avoidable, pay nothing until the end of the war. Then there are some people with whom times are always hard, and this class are dolefully lamenting. Where, they say, is our next dollar to come from; how do we know that the country is not heading straight to everlasting perdition? Still another and larger class are dividing their time between their business and devising war measures and strategic operations, happily, of which the Government never hears. But all this seriously affects business. The causes are too numerous and varied to undertake to apply a remedy. The war will, undoubtedly, be over before we all come to our senses, notwithstanding a noticeable improvement in that direction since the press censor has sharpened his pencil. The truly patriotic business man will go straight ahead on schedule time attending strictly to the details of his private affairs, pushing harder than ever, if his object seems more difficult of attainment." There is a steamer due with a large cargo of brimstone, which will relieve this market. Nitrate of soda is weak and dull, and the same may be said of chlorate of potash. In their letter Messrs. J. P. Brunner & Co. of Liverpool say:

"The stagnation in chemicals still continues, and export trade generally is more or less of a hand to mouth character. Soda ash firm, but there is little fresh business passing. We quote spot range as to market as follows: Leblanc ash 48%, £4 10s. to £5 15s. per ton; 58%, £4 17s. 6d. to £5 per ton; net cash; ammonia ash, 48%, £4 to £4 5s. per ton; 58%, £ 5s. to £4 10s. per ton, net cash. Bags 5s. per ton under price for tierces. Soda crystals in fair repuest, and quoted at £2 17s. 6d. to £3 per ton, less 5% for barrels, or 7s. less for bags. Caustic soda in limited demand, and easy, the spot range, as to market, being about as follows: 60%, £6 3s. 9d. to £6 5s. per ton; 70%, %7 3s. 9d. to £7 5s. per ton, net cash; 74%, £7 16s. 3d. to £7 17s. 6d. per ton; 76%, £8 to £8 5s. per ton, net cash. Bleaching powder is rather better for softwood, the home consumption showing a little improvement, but export business is slow, and hardwood is nominally quoted at from £5 15s. to £5 17s. 6d. per ton, net cash. Chlorate of potash dull, at 3 3-16d. to 3¼d. per lb. Bicarb. soda quiet, and export prices vary considerably according to destination, ranging from £5 15s. to £6 15s. per ton, less 2½%, for the finest quality in one cwt. kegs, with usual allowances for larger packages. Sulphate of ammonia attracts little attention from buyers, and is quoted £9 6s. 3d. to £9 8s. 9d. per ton, less 2½% for good gray 24@25% in double bags f. o. b. here, as to quality. Nitrate of soda quiet, but spot stocks are light, and holders quote £7 17s. 6d. to £8 per ton, less 2½%. for double bags f. o. b. here. The lower figure would be slightly shaded for July delivery."

Heavy Chemicals.

ALKALI.—The very low prices that have been prevailing in this country have stimulated export trading, which has resulted in a large business being done to all countries. There has been a fair inquiry for domestic high test, for delivery over next fire, and some sales have been made at about 45@50c. for bags f. o. b. works. The jobbing demand in this section is fairly good, at prices ranging from 65@75c. as to test, make and style of packing. Foreign high test is a shade easier at 55c. for bags on dock, and at 70@75c. for B. M. as to quantity.

BICARB SODA.—There is a good jobbing demand both for prompt and forward delivery at 1¼c. f. o. b. for ordinary, and at 3½c. for extra grades, usual discount terms.

CRYSTAL CARBONATE.—The usual jobbing demand prevails for prompt and forward delivery. As yet no change has been made by the agents, who are quoting car lots at $1.60 ,and for jobbing parcels at 1.70@1.75c., as to the size of the order.

CAUSTIC SODA.—There is a good inquiry for contracts extending over the balance of the year, and several are reported of domestic high test at about 1.50c. For next year there is also considerable talk being done, but, as one of the large domestic makers is reported as being well sold ahead, the others are not anxious for new business until the horizon is cleared up somewhat regarding future business. There is not much jobbing trade in progress for the reason that about all the large consumers are under contract for the balance of the year. Prices may be quoted at 1.65@1.85c., as to brand, test and seller. Powdered 98 per cent. is dull and slow at 2¾@3c., as to test and make.

SAL SODA.—There is no falling off in the demand for domestic either for prompt or forward delivery, as is shown by the degree of promptness with which consumers take up their contract deliveries. In this section prices are steady at 55c. f. o. b., usual discount terms. Concentrated is also feeling the effects of the warm weather, and a good business is being done in Arm and Hammer at 1.35@1.65c. f. o. b., as to style of packing. Foreign is doing better for arrival, with sales of 50 tons reported at 62½c.

MONOHYDRATE CRYSTALS.—The bulk of the business passing at the moment is deliveries upon regular contracts. There has also been a fair inquiry for forward, which is satisfied at prices ranging from 1.25@1.30c., and for "snowflake" at 1@1½c. f. o. b. works, usual discount terms.

BLEACHING POWDER. — A fair jobbing trade is reported for spot and nearby arrivals of prime high test Liverpool makes at 1.65@1.70c., as to test, brand and quantity. Other brands are dull at 1.40@1.50c., as to test, make and seller.

Acids.

ACETIC.—Only a small jobbing demand is reported for spot goods, and this is satisfied at prices ranging for No. 8 from 1.35@1.50c., as to make, quantity, seller and delivery point.

MURIATIC.—No change in the situation, which remains a dull one, as far as new business is concerned. The bulk of the trade passing is deliveries upon regular contracts at prices ranging from 1.10@1.25c., as to strength and quantity.

OXALIC.—A good jobbing demand is reported for spot and nearby parcels at 6½@6¾c., as to brand and quantity.

ESTABLISHED 1829.

MARTIN KALBFLEISCH CHEMICAL CO.

100 WILLIAM ST., NEW YORK.

BUFFALO CHEMICAL WORKS

BUFFALO, N. Y.

Oil of Vitriol, Nitric, Muriatic and Acetic Acids, Aqua Ammonia, Aqua Fortis, Muriate of Tin, Alum, Sulphate of Zinc, Glauber's Salt.

SPECIAL ALUM FOR PAPER MAKERS
MIXED ACID FOR NITRO-GLYCERINE MAKERS
Special quotations given on application.

TARTARIC.—No change in the situation, which remains a dull one, with the wants of the trade being satisfied by outside lots at 31½@31¾c. for crystals, and 32@32½c. for powdered, as to quantity and seller.

SULPHURIC.—The bulk of the business passing at the moment is deliveries upon regular contracts. The only ones that show an increase is the soda-water, and those who are engaged in making war material. Beyond this new business is scarce. Prices, however, remain steady and may be quoted at 1.10c. for 66 deg. in drums and 1.15c. and upward for carboys, as to the size of the order.

Miscellaneous Chemicals.

ACETATE OF LIME.—Rather more doing in an export way, otherwise trade is slow. Prices remain steady at .90@.95c. for brown, and 1.25@1.30c. for gray, as to quantity and delivery point.

ALUM.—Only a small retail trade is reported outside of regular contract deliveries, which are being taken up freely, considering the dull state of general trade. Prices remain unchanged at 1.65@1.75c. for lump and 1.75@1.85c. for ground, as to make and quantity.

ARSENIC.—It is reported that some of the Paris green makers are offering their surplus stocks on the market. This has a tendency to depress prices, which are iregular at 4⅛@4½c., as to brand, quantity and seller. Red continues scarce and held steady at 8@8½c.

BRIMSTONE.—The market remains easy under free arrivals, which have supplied the pressing wants of the trade. A steamer is due with 4,000 tons, which will further relieve the market. Spot prices may be quoted at $24.50, and for July-August shipment at $24 per ton, with thirds about $2.50 per ton less.

BLUE VITRIOL.—There is a good export inquiry, but buyers and sellers are apart at the moment. The jobbing demand keeps up good, and is satisfied at 3½@3⅝c. for extra and at 3⅜c. for ordinary grades.

CHLORATE OF POTASH.—Early in the week several sales were made at 9c., but later, under pressure to sell second hand parcels, prices eased up and at the close, while 8½c. was asked, 8¼@8⅜c., according to brand, was best bid. Sales reported, 100 kegs at 8½c.

CHLORATE OF SODA.—No change in the situation; only a small retail demand is reported at 9¼@9½c., as to make and seller.

CARBONATE OF POTASH.—The usual jobbing demand prevails for spot goods, with a slight increase in the inquiry for forward delivery. Prices are fairly steady at 3@4¾c., according to test, make and quantity.

COPPERAS.—The bulk of the business at the moment is being done by outside makers, who are selling car lots at 55c. The combinations are still quoting 62½c.

CREAM OF TARTAR.—Only a limited demand is reported for spot goods, and this is satisfied by outside holders at 24½c. for crystals and 24¾@25c. for powdered.

GLAUBER'S SALT.—Rather more demand for delivery after the turn of the month, and otherwise trade is slow. Prices remain fairly steady at 50@75c., as to quantity and delivery point.

NITRATE OF SODA.—The steamer Coya, with 20,000 bags, has arrived, to further depress the market. Resales are being made from dock at 1.68@1.72½c., as to quantity and seller. Shipments are dull and range from 1.60@1.65c., as to date of arrival.

SAL AMMONIAC.—A fair consuming demand is reported for spot and nearby parcels at 4½@4¾c. for rough, 5@5¼c. for white grain and 8¼@8⅜c. for lump.

SUGAR OF LEAD.—Rather more doing with the mills for delivery after the turn of the month. There is some talk of prices being raised, but so far it has not materialized. We quote prime white crystal at 7¼c., and broken at 5c.

SALTPETER.—Under free arrivals and a slack demand prices have eased off and may now be quoted at 5½@5¾c. for spot, and for arrival at 5@5¼c. Refined is dull at 6½@7½c., as to quality.

Ammoniates, Potashes, Etc.

Trade in the leading ammoniates has been very quiet the past week. Buyers are holding off, as it is intimated that rail freights may be reduced after the first of the month. Meanwhile there is no pressure to sell, and prices may be quoted fairly steady for Western products. Sulphate of ammonia is easier under pressure to sell second hand parcels from dock at $2.35, while shipments are quoted at $2.40. Blood is nominal at $1.70@1.72½ f. o. b. Chicago and New York soft at $1.80@1.82½. Tankage is dull and easy at $16 per ton f. o. b. Chicago for 9 and 20. Hoof meal is fairly active at $1.50@1.52½ f. o. b. Chicago. Calcutta is held steady for arrival at $24 for either No. 3 or 4. Domestic is dull at $21 for steamed and $24 per ton for raw. Fish scrap is selling fairly good at $17.50 per ton f. o. b. factory, and at $19.50 per ton for bags on the spot. In their letter Messrs. Thos. H. White & Co. say:

"Ammoniates continue quiet, but at slight concessions current offerings are absorbed. There is a considerable under-current of inquiry, which is on the lookout for cheap material, and this seems to be sufficient to prevent much accumulation at producing centers. We quote: Crushed tankage, 8 and 20, $14.50 per ton f. o. b. Chicago; crushed tankage, 10 and 15, $17 per ton f. o. b. Chicago; crushed tankage, 9½ and 15, $16 f. o. b. Chicago; concentrated tankage, $1.45 per unit f. o. b. Chicago; hoof-meal, $1.50@1.52½ per unit f. o. b. Chicago; ground blood, $1.70@1.72½ per unit f. o. b. Chicago; crushed tankage, 9 and 20, $1.85 and 10 c. a. f. Baltimore. Sulphate of ammonia unchanged. Foreign, $2.35@2.40 c. a. f. Baltimore and New York. Domestic, $2.25 f. o. b. factories West, and $2.40 coast delivery."

Latest Patents.

605,379—RETORT AND METHOD OF MAKING SAME. Filed June 12, 1896. Issued June 7, 1898.

605,458—PROCESS OF MAKING SULFIDS. Filed July 22, 1896. Issued June 7, 1898.

605,483 — GLASS-GATHERING MACHINE. Filed Aug. 13, 1897. Issued June 14, 1898.

605,491—QUININ DERIVATIVE AND PROCESS OF MAKING SAME. Filed Oct. 19, 1896. Issued June 14, 1898.

605,568—ANTHRAQUINONE DYE. Filed Dec. 29, 1897. Issued June 14, 1898.

605,591—NON-REFILLABLE BOTTLE. Filed Jan. 20, 1898. Issued June 14, 1898.

605,637—PROCESS OF MANUFACTURING CEMENT. Filed Oct. 14, 1897. Issued June 14, 1898.

605,648—MACHINE FOR MANUFACTURING GLASSWARE. Filed Oct. 5, 1897. Issued June 14, 1898.

605,694—PROCESS OF MAKING CYANIDS. Filed July 23, 1896. Issued June 14, 1898.

605,697—PROCESS OF UTILIZING ACID SULFATES OF SODA. Filed Dec. 20, 1897. Issued June 14, 1898.

605,756—OIL WELL TUBING ATTACHMENT. Filed Dec. 17, 1897. Issued June 14, 1898.

605,802.—FURNACE FOR WORKING ZINC AND LEAD. Filed March 18, 1897. Issued June 14, 1898.

The Wyckoff Steam Pipe Covering.

Results reported in the use of the Wyckoff covering for steam pipes stamp it beyond all question more efficient and economical than either solid wood covering or vitrified pipe, especially if the pipe is to be laid underground. It is waterproof and will effectually prevent any appreciable loss of heat where steam is transmitted either short or long distances, in or out of doors. Neither will it heat through like iron pipe, and it serves as an admirable protection to the pipe it incloses. This style of pipe covering is manufactured by A. Wyckoff & Son, Elmira, N. Y., and is built up of eight white pine staves, one inch thick, jointed together in a simple but effective manner. The staves are wound with galvanized steel wire and then wrapped with two thicknesses of heavy corrugated paper. An outer casing of one-inch white pine jointed staves also wound with galvanized wire is added, a non-conductive lining being put between them. The whole is coated with asphaltum, making a combination of non-conductive wood and paper that absolutely prevents the radiation of heat and consequent loss of power. The Wyckoff covering weighs only one-third as much as solid wood covering, and is guaranteed not to check.

The patent wood water pipe, made by A. Wyckoff & Son, is much the cheapest form of water pipe made. It may be laid at half the expense of iron pipe, is easier to handle and costs much less for transportation. While extremely light in weight, it has great strength and is very durable. Several styles are offered and known as plain square water pipe, strengthener water pipe, round and coated water pipe, and one of special construction, where pipe of extra large size is required. The wood water pipe is in all cases made from

FERGUSSON BROTHERS
Commission Merchants,
109 Chestnut Street, Philadelphia,
HIGH TEST ENGLISH and SCOTCH BLEACHING POWDER
CAUSTIC SODA 76%—the best made—in drums. Double Refined 98% in barrels and cans.
ABSOLUTELY PURE,
True CAUSTIC POTASH large and small drums.
Carbonate Potash, Chlorate Potash, Chlorate Soda, Johnson's Eng. P'tl'd Cemen
and all other chemical specialties used by
Glass, Paper, Soap, Woolen and Cotton Manufacturers.

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Bi Sulphite of Soda
Yellow Pruss. Potash
The Roessler & Hasslacher Chemical Co.
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BREWERS, SUGAR REFINERS,
DYERS, BLEACHERS.
REFRIGERATING, DISINFECTING.
Anhydrous Liquid
Sulphurous Acid—SO_2
SOMERSET CHEMICAL CO.
100 William St., NEW YORK

EDWARD HILL'S SON & CO.
25 and 27 Cedar St., NEW YORK.
SOLE AGENTS in U. S.
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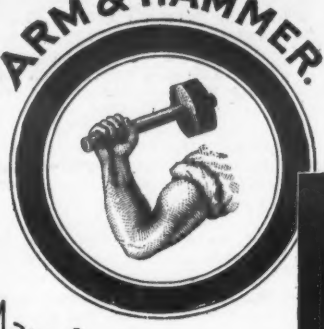
CARBONATE POTASH.
SAL SODA,
CAMBIER,
CUTCH,
LEMON OIL.
COCOANUT OIL, Ceylon,
COCOANUT OIL, Cochin,
SPICES,
CLOVES.
ARSENIC,
OPIUM.
DOUBLE STAR CITRONELLA (IN ORIGINAL PACKAGES.)



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ZENITH CARBONATING POWDER.

FOR BOTTLERS USE AND MANUFACTURERS OF CARBONATED WATERS.

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This Alkali contains 58 Per cent. of Alkali or nearly 99 per cent. of Carbonate of Soda. It is the most economical form of Soda for Manufacturers of Soap, Glass, Paper, Wood Pulp and Colors, and for Printers and Bleachers.

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LIMITED

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AND

SOLVAY PROCESS CO.

SYRACUSE, NEW YORK

THE SOLVAY PROCESS CO. will make by this same process an Alkali adapted for Window Glass makers testing 48 per cent.

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Sole Agents for the United States 22 William St., New York

WING & EVANS have appointed as exclusive Sale Agents

LINDER & MEYER, BOSTON, for New England States, who are prepared to contract for future delivery

carefully selected white pine, in lengths varying from 4 to 8 feet long, connected together in a manner which insures them being perfectly water and air tight. The lengths are simply driven together to form the pipe line desired. The Wyckoff pipe is acid proof and very desirable for conveying chemicals and liquids of various kinds. Full information will be found in a tasteful booklet, which the manufacturers publish and copies of which may be had upon application.

(Special Correspondence to the Reporter.)

Revenue Stamp Regulations

Washington, June 24, 1898.

The Bureau of Internal Revenue was nearly brought to a standstill early in the present week by reports from collectors throughout the country indicating an enormous demand for the war revenue stamps, which would be required in advance of the taking effect of the law of July 1. When these estimates were presented to the Bureau of Engraving and Printing, Chief Johnson declared his inability to meet the requisitions, and, after consultation with the Secretary of the Treasury, the Commissioner drafted a letter to the Speaker of the House urging that a joint resolution be passed extending the date for the taking effect of the new law to July 15. In support of this urgent request, Commissioner Scott appeared before both Ways and Means and Finance committees and argued the physical impossibility of preparing an adequate number of stamps. Under ordinary circumstances such a request coming from the Administration would have been promptly met by Congress, but in this case both committees declined to recommend any action to their respective houses. It was pointed out that a fortnight's delay in the taking effect of the law would cost the Government several million dollars of revenue and would set a bad precedent for the future. The Commissioner was urged to make some kind of a temporary arrangement to tide over the difficulty in order that the revenues should not be reduced at the outset. Having no other alternative, the Commissioner, after a conference with the Secretary, decided to postpone the printing of all new stamps except those covering proprietary medicines, perfumery, cosmetics and chewing gum, and to apply all the facilities of the Bureau of Engraving and Printing to the engraving of these stamps, and to the imprinting of old issues of tobacco and other revenue stamps, and green one-cent postage stamps, with various numerals indicating the new rates.

The Internal Revenue Bureau has already begun to rule upon the scope of the provisions of schedule B, and has rendered one decision of far-reaching importance. An application was recently received from the Collector of Internal Revenue of Maryland for a ruling upon the question as to whether certain non-secret preparations would be liable to tax under the new law. In reply, Commissioner Scott says:

"Messrs. Hollander, Koshland & Co., manufacturing pharmacists, 515 East Lombard street, Baltimore, in a letter to this office dated the 11th instant, submit the question whether the medicines which they manufacture, 'non-secret preparations,' are subject to stamp tax under the act of June 13, 1898.

"In regard to these preparations they say:

" 'The formulae are printed on either the wrapper or the label; there is no privacy, and we claim no proprietorship, copyright or trade mark, everybody having the full and free privilege of putting up the same preparation and under exactly the same style if they so desire. From our reading of the present enactment we take it that such goods are exempt, as when previously proprietary preparations were stamped ours were exempt under the act of Feb. 8, 1875, chapter 36, section 22.'

"They have to-day been referred to you, and you will please inform them that the exempting provision of the act of Feb. 8, 1875, to which they refer, is not contained in the present act of June 13, 1898, and that there is no provision in the present act which can be construed as exempting their medicines from the stamp tax on the ground that they are 'non-secret preparations,' for which the manufacturers claim no proprietary rights.

"Section 20 of the act of June 13, 1898, requires that:

" 'The stamp taxes provided for in Schedule B of this act shall apply to all medicinal articles compounded by any formula, published or unpublished, * * * which are advertised on the package or otherwise as remedies or specifics for any ailment.'

"Tax must therefore be paid on the medicinal compounds in question put up and sold by them, and the requisite stamp affixed to each package."

In briefing this decision for filing in the archives of the bureau, it has been indorsed by the Commissioner as follows:

"Every compound which is held out as a remedy for disease, even though the formula by which it is made is not a secret, and the manufacturers claim no proprietary right therein, is subject to stamp tax under schedule B of the act of June 13, 1898."

Certain officials of the bureau maintain that this decision covers the case of any standard pharmaceutical, on the ground that such preparations have only the single function of medicines, and that whether advertised as such on the package, their sale carries with it an implied representation that they are remedies for certain ailments within the meaning of the law. On the other hand, it is maintained by officials of equal experience that standard pharmaceuticals, which are only advertised to the trade, and are not offered as specifics, do not come within the scope of schedule B. The question is one of the highest importance and will no doubt be presented to the commissioner for definite ruling at an early date.

With reference to the stamping of stocks on hand, Commissioner Scott has written the following letter to Representative Shattuc of Ohio:

"Your letter of the 14th instant, inclosing letter which you have received from Messrs. Rheinstrom, Bettman, Johnson & Co., of Cincinnati, asking a construction of the clause in the new revenue law in regard to stamps on proprietary articles, has been received.

"In reply, I have the honor to state that on and after July 1, 1898, the maker or manufacturer of any of the articles named in Schudule B must affix the proper stamp thereto, before the same are sold, sent out, removed, or delivered. As to stock in hands of dealers on the first day of July, 1898, the law provides as follows:

" 'It shall be deemed a compliance with this act as to such articles on hand in the hands of wholesale or retail dealers as aforesaid who are not the manufacturers thereof, to affix the proper adhesive tax stamp at the time the packet, box, bottle, pot, or phial, or other inclosure, with its contents is sold at retail.' "

A literal interpretation of the new law as affecting importations would have entailed endless confusion even if it were found possible to carry it out. For example, the proviso to Section 24 requires that "Internal revenue stamps required by existing law on imported merchandise shall be affixed thereto, and canceled at the expense of the owner or importer, before the withdrawal of such merchandise for consumption, and the Secretary of the Treasury is authorized to make such rules and regulations as may be necessary for the affixing and canceling of such stamps not inconsistent herewith."

After conferences with the customs officials of the department, it was decided that the law could not be literally enforced, and that it should be considered full compliance therewith for importers to purchase the stamps necessary to pay the revenue tax on any given importation, cancel the same in the presence of a customs' officer, and give an undertaking in writing to affix the stamps when the goods were unpacked. In this class of importations it is expected that the department will allow the stamps to follow the goods into the hands of the person selling them in less than case lots, who will be required to affix them before delivery. The department feels that there is no danger to the revenue from this practice, as the stamps will have been canceled at the time of the importation of the goods, and as the goods cannot be sold unless the stamps are affixed, there is no opportunity for fraud. Special care will be taken in all such cases to see that the goods are not undervalued, and that cases do not contain a larger number of bottles or packages than are called for by the invoices.

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98% Powdered, in Cans, Pails, Tubs and Barrels
70%, 74%, 76% in Drums

CAUSTIC POTASH

In original Large and Small Drums
Granulated, in Cans, Pails, Tubs and Barrels

Champion 98% Pure Powdered Lye Champion Pure Potash or Lye

Chloride of Lime in 10 lb., 5 lb., 1 lb., ½ lb. and ¼ lb. Zinc Cans

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HONEST GOODS
LOWEST PRICES

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BICARB SODA

(Absolutely Pure)

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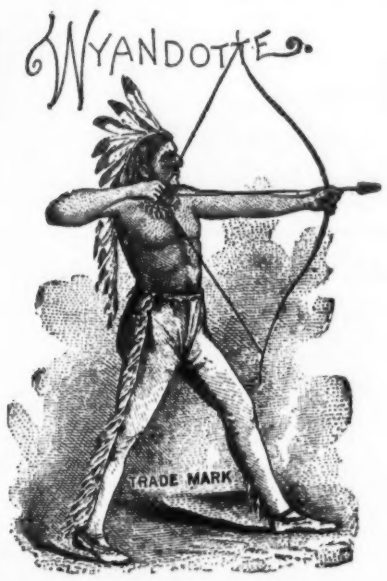

CAUSTIC SODA

60% to 77%

(Special Soft Grades for Grinding)

SODA ASH

48% to 58%

(Light and Dense)

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PURE ALKALI 58% SODA ASH 48%

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BLEACHING POWDER

CAUSTIC SODA 99% PURE

Quotations promptly furnished for Spot or Forward Delivery.

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Boston, Mass., 98 Commercial St.

DYE MARKET.

Note—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. The prices current will be found on page 37.

Saturday Evening, June 25, 1898.

There has been no change in the conditions governing the market for dyes and dyestuffs, manufacturers and dealers reporting little or no inquiry. Prices are, however, pretty well maintained.

ACID PICRIC.—Lack of inquiry has caused a reduction in the price to 25@26c.

ALBUMEN.—Egg remains in fair demand and steady at 64@70c., as to quality and seller. Blood is rather quiet at 16@20c.

ANILINE OIL AND SALT.—Both articles remain quiet and unchanged, the former at 10½@11c. and the latter at 9@9½c., although contracts on salts could be placed at 8¾c.

DEXTRINE.—There has been no change in the position of potato, and, with a fair demand, prices remain unchanged, though steady. Corn is generally held at 2⅛@2.15c. by the carload, but a bid of 2.05c. would probably be accepted.

DIVI DIVI.—The situation has not altered. The demand is light, and, with no arrivals, the stock is not large. Dealers continue to ask $37.50@50, as to quantity.

GAMBIER.—The market has been comparatively quiet, the business having been confined to small lots from store, which dealers have filled at 2¾@3c., as to quality, although it has been intimated that 2.70c. would be accepted for a round lot. There are orders for sailer to arrive at 2.70@2¾c., but 2.80@2.85c. is asked. Sail shipment is being offered at 2.82½c. and steamer at 2.70c. On the Drumpark 100 bales were sold at 2.67½c., July delivery, but 2¾c. has been bid and declined. The week's feature is the amount of goods coming that are at present unsold. The Columbus, now due, has 900 tons; the Stella del Marie, due in July, 950; the McLauren, 800; Drumpark, 1,150; steamer Energia, 450, a total of 4,250 tons to dealers, and the statement has been made that about one-half has not been sold.

HYPOSULPHITE OF SODA.—The market is quiet and unchanged at 1.60@2c.

NUTGALLS.—Trade is dull, both for Aleppo and Chinese. The former is held at 12½c. and upward, as to seller, and the latter at 14@15c., as to quantity.

PRUSSIATE OF POTASH.—Outside lots are not so plentiful, and for this reason the market is a trifle firmer, with 15½c. generally asked, although possibly a stray lot might be obtained at a shade less.

SUMAC.—There has been a continuation of the good demand for Sicily, and 25 tons Nos. 1 and 2 have been disposed of on the spot at $44@48.50, but some dealers obtain $50 in a small way.

STARCH.—Corn is being offered 10c. lower by reason of the clause in the revenue tax measure compelling the branding of all mixed wheat flour. The revised prices are 1.37c. for pearl and 1.42c. for powdered in barrels, carload lots. Some dealers will not meet these prices. Potato and wheat are unchanged.

TIN CRYSTALS.—The price was advanced 2c. on Monday by the combination, partly by reason of the advance in tin. The price is now 14@14½c., as to quantity.

The Analysis of Citrate of Lime.

BY A. SOLDAINI AND E. BERTE.

Citrate of lime is an industrial product of great importance in Sicily, where factories for its production are continually on the increase. It contains from 64 to 70 per cent. of crystallizable citric acid, and is much more convenient for exportation than concentrated lemon juice.

Some years ago the business annoyance caused by the confusion arising between the two analytical bases of 201 and 210 (molecular weight of citric acid, crystallized with half a molecule or with one molecule of water), induced some local chemists to make a change in their system of analysis by calculating the result of the basis of 210 and estimating the crystallizable citric acid alone, whereas previously, they said, they figured on the basis of 201, taking, however, into account as citric acid all the organic acid in combination with lime. They further stated that the results obtained by these two different systems are about the same. What they meant by "organic acid" nobody has been able to derstand, unless tartaric acid is luded to. Even admitting this to the case, it appears to us that it is right to conclude that tartaric acid ways accompanies citrate of lime, In any case, considering the greater ubility of the tartrate, it is logica infer that it disappears during the washings. In any case, what is wa from a commercial point of view is repeat, a uniform method of anal to be agreed on by all chemists.

There are two methods indicate literature, viz., the lime method and lead method, which do not give ide cal results, as the lead gives gene from ⅓ to 1 per cent. higher than other.

With a view of obtaining accu comparative results from both meti we operated on chemically pure cit of lime expressly prepared by us dried in a water oven—the latte necessary precaution, because the groscopicity of the citrate makes vary considerably, which is also of commercial citrate of lime, wh moreover, is often alkaline. Our a ysis of pure citrate of lime was alsc tended to decide whether it answ the formula $Ca_3(C_6H_5O_7)_24H_2O$ or o formulas with more or less water there was some doubt on this point. also wished to settle at what temp ture water is totally eliminated lea anhydrous citrate $(C_6H_5O_7)_2Ca_3$. found from our experiments that citrate of lime contained when drie a water-oven 4 molecules of wate which it lost two at a temperatur 115-125°C., and the others at 180-19 The citrate loses the hygroscopic w in the water-stove as well as in vac on H_2SO_4. The estimation of the c acid contained in the anhydrous cit gave by the lime method the follov results:

1. Gram 0.4200 substance dried at 185°C. gave $CaSO_4$, equivalent to gr 0.3542 of crystallizable citric acid (2 so that calculating upon the anhyd citrate the yield of acid should be per cent., and we actually got 84.33 cent.

In other analyses we found:

2. Gram 0.5760 of substance drie water-oven lost at 180°C. gram 0.07

3. Gram 1.6770 of substance drie water-oven lost at 185°C. gram 0. This gave afterward gram 1.154 $CaSO_4$.

The loss of water by calculation f $Ca_2(C_6H_5O_7)_24H_2O$, is 12.63 per c and we found 12.15 and 12.85; while yield of crystallized citric acid on same basis is 71.42 per cent., and we tained 71.78.

Analyses made of material conta in a small beaker exposed to the air quite a length of time gave the foll ing results:

	I.	II.	III.
Loss at + 100° C...	4.77	4.75	4.71
Crys. cit. acid	73.30	73.52	73.38

It follows from this that pure citr of lime dried in a water-oven is hygroscopic.

Commercial citrate of lime contai about 90 per cent. of the pure pro is probably more or less hygrosc according to its degree of desiccat The hygroscopicity of citrate of may also explain certain differences tween chemists, and it strengthens opinion that in order to avoid disp and greatly diminish discrepancies tween the results of different ch ists a uniform method of anal should be agreed upon. We think analyses should be conducted on material dried in a water-oven, and loss of water be stated. At any rat obtain greater harmony of results tween chemists it should at least be cided which of the two methods sh be followed—viz., lime or lead—or certificate indicating the results tained should indicate the method lowed, so as to enable one to m comparisons between the results of ferent chemists. The lime method tainly deserves preference for quick of results, but the lead one, tho much longer and expensive, has the vantage of greater exactitude.

Moreover, in practising the method, one meets with more un tainties, and it is necessary to settle precise way and the quantity of hot-water washings* if it is des that the chemist should give unif results, discrepancies of as much per cent., more or less, being poss even in the case of analyses made one and the same chemist; and this plains how certain mistakes can multiplied when the disagreeing res are no longer those of one and the s chemist, but are due to two diffe analysts; the difference of each of t has been made in the opposite direct —Messina Laboratorio Chimico Mun pale.

*For every 1 gram of substance taken for alysis, not more than 70 c. c. of water sh be employed, taking care that it suffices wash the citrate of lime thoroughly, so the last drops of the filtrate give at most a very light coloration with phenolphthale

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ALIZARINES, COAL TAR DYES.

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MIXED ACIDS FOR NITRO GLYCERINE, CELLULOID, &c.,

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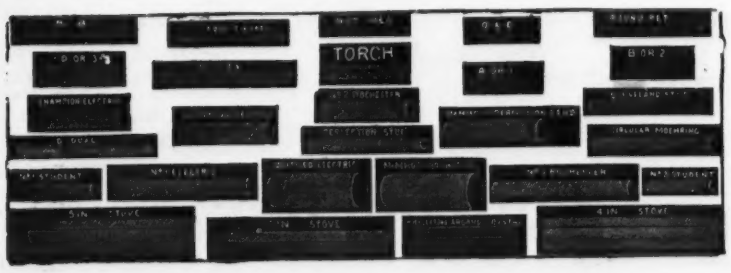

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